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Employment of Humanities Ph.D.'s: a departure from traditional jobs

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This report presents analyses of the employment status of humanities doctorates. The report is based primarily on data from the 1977 Survey of Doctorate Recipients (SDR), but also includes data from the annual Surveys of Earned Doctorates. The SDR was conducted under the auspices of the Commission on Human Resources (CHR) of the National Research Council. Support for the project was provided by the National Endowment for the Humanities and the National Science Foundation.

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Highlights

The report, "Employment of Humanities Ph.D.'s: A Departure from Traditional Jobs", is based on the results of the National Research Council's 1977 Survey of Doctorate Recipients (SDR) and on annual surveys of newly earned doctorates (Doctorate Records File). The survey (SDR) included a stratified random sample of over 15,000 humanities Ph.D.'s who had earned their degrees from U.S. universities between January 1934 and June 1976.

The analyses presented in this report pertain to the 60,140 humanists estimated to be in the U.S. labor force in February 1977, of whom 90.5 percent (54,450) were full-time employed, 5.3 percent (3,150) part-time employed, 0.9 percent (570) on postdoctoral appointments, and 3.3 percent (1,970) unemployed and seeking employment.

Highlights from the report are as follows:

- The number of Ph.D.'s awarded in the humanities has increased steadily from an average of about 250 per year during the 1920's to approximately 4,500 per year during the 1970's. There has, however, been a decline in the number of humanities Ph.D.'s awarded per year since the mid-1970's.

- Although women constituted less than one-fourth of the total humanities Ph.D. labor force in 1977, almost half of the nearly 2,000 humanities Ph.D.'s who were unemployed and seeking employment were women.

- Only 78 percent of the women humanities doctorates in the 1977 U.S. labor force were full-time employed in 1977 compared with 94 percent of the men. As many as 13 percent of the women doctorates were part-time employed compared with almost 3 percent of the men.

- Of the male humanities Ph.D.'s in the 1977 U.S. labor force, almost 87 percent of the 1975-76 cohort were full-time employed compared with 96 percent of the 1934-68 cohort. Only 69 percent of the 1975-76 female Ph.D.'s in the labor force were full-time employed in 1977 compared with 86 percent of the 1934-68 cohort of women.

- Approximately 15 percent of the full-time employed humanities doctorates indicated that they were working outside their Ph.D. field in 1977, with slightly higher percentages of women doctorates, Ph.D.'s 55 years of age or older, 1975-76 Ph.D. recipients, and Ph.D.'s in history and classical languages so employed.

- Only 50 percent of those Ph.D.'s employed full-time outside of their Ph.D. field were employed by academic institutions in 1977 compared with 95 percent of those employed within their Ph.D. field.

- Of the humanities doctorates who were full-time employed in academe and working in their field in 1977, over 81 percent were teaching whereas for those Ph.D.'s in academe who were employed outside their doctoral field, almost half were engaged in management and administration.

- The highest mean annual salaries were calculated for humanities Ph.D.'s employed in academic jobs outside their Ph.D. field ($24,200), whereas the lowest mean salaries were estimated for those humanities Ph.D.'s who were employed in nonacademic jobs outside their field ($19,300).

- Over half of the recent Ph.D.'s (1972-76 cohort) who were employed full-time outside their Ph.D. field in 1977 indicated that they were so employed because a position in their field was not available, whereas the 1934-68 Ph.D.'s indicated they were so employed because they preferred such a position or were promoted to the job.

- In 1977, only 79.2 percent of the employed 1972-76 humanities Ph.D.'s were working in institutions of higher education compared with 90.7 percent of the 1934-68 cohort.

- In 1977, among the academically-employed humanities Ph.D.'s, over two-thirds of the men were in senior ranks, compared with approximately one-half of the

women. Approximately three-fourths of the male humanities Ph.D.'s employed at universities and four-year colleges in 1977 had achieved tenure compared with 57 percent of the women.

- Among nonacademically employed humanities Ph.D.'s, business and industry was the most frequent employer, and management and administration, the most frequent work activity in 1977.

Overview

In 1977, a Survey of Doctorate Recipients (SDR) was conducted during the period March through May by the Commission on Human Resources (CHR) of the National Research Council (NRC), under the sponsorship of the National Science Foundation, the National Endowment for the Humanities, and the National Institutes of Health.[1] This report contains an analysis of data concerning the humanities Ph.D.'s who were included in the survey.

The survey was designed to obtain current information on the employment characteristics of a stratified random sample of scientists, engineers, and humanists, who had earned Ph.D.'s within the period January 1, 1934 through June 30, 1976 and who were residing in the United States in February 1977. Those surveyed were requested to provide employment information for the period February 6-12, 1977.

The survey sample was selected from the NRC's Doctorate Records File (DRF), a file that includes virtually all individuals who have received Ph.D.'s from universities in the United States since 1920.[2] The SDR sample was stratified by Ph.D. field, year of doctorate, sex, and racial/ethnic identification to provide adequate numbers to yield reliable estimates for certain subgroups and to minimize potential bias due to

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[1]See Appendix A for a copy of the questionnaire used in the 1977 Survey of Doctorate Recipients.

[2]The DRF is based on CHR's annual Survey of Earned Doctorates, an ongoing compilation of information taken from questionnaires filled out by all new Ph.D. holders on completion of the work for their degrees. See Appendix B for a copy of the questionnaire used in the Survey of Earned Doctorates.

insufficient coverage of the population.[3]

The overall results of this survey were reported in NRC's 1978 publication, "Science, Engineering, and Humanities Doctorates in the United States: 1977 Profile." Because of the richness of the data within this stratified random sample, and because such comprehensive information on humanities Ph.D.'s has never before been collected, the data concerning the employment of the humanities Ph.D.'s have been singled out for closer scrutiny in the present report.

The statistics given here are based on population estimates resulting from sample member responses to the survey questionnaire. Table 1 documents the response to the survey. The random sample was stratified and the sampling rates were varied to allow for adequate representation of smaller groups, i.e., women (less than one-fourth of the total) and racial/ethnic minority groups (just under 2 percent). Within each stratum, the sample was weighted by a factor equivalent to the reciprocal of the sampling rate, thus inflating the numbers to the populations of that particular subgroup. In addition, a similar multiplier was used to adjust for nonresponse. In this way, although only 20 percent of all humanities Ph.D.'s were surveyed, characteristics of the total population could be estimated.

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[3]Bias due to nonresponse is of particular concern when dealing with a relatively small portion of the population, such as those unemployed or employed part-time in positions for reasons other than personal preferences or employed in work unrelated to their doctorate training. Although the effects of nonresponse bias on 1977 survey data have not been addressed in this report, a study is planned for early 1980 to determine if such bias is present in the survey results.

TABLE 1 Response Rates for the 1977 Survey of Doctorate Recipients, Humanities Ph.D.'s Only

	Sampling Frame[a] (N)	Sample (n)	Contacted[b] (n)	Survey Responses[c] (n)	Response Rate (B)[d] (%)
Total	74,032	15,014	13,211	9,455	71.6
Field of Doctorate					
History	19,257	2,784	2,459	1,809	73.6
Art History	1,722	643	575	430	74.8
Music	3,910	929	835	621	74.4
Speech	4,913	1,038	926	653	70.5
Philosophy	6,214	1,186	1,030	681	66.1
Other Humanities	2,202	1,059	932	705	75.6
English/Amer. Lit.	20,891	2,859	2,548	1 830	71.8
Classical Languages	2,282	706	612	448	73.2
Modern Languages	12,641	3,810	3,294	2,278	69.2
Year of Doctorate					
CY1930–49	10,33[illegible]	2,388	1,605	1,157	72.1
CY1950–FY1961	14,[illegible]	2,604	2,309	1,648	71.4
FY1962–69	18,66[illegible]	3,451	3,210	2,347	73.1
FY1970–74	22,016	4,282	3,923	2,715	69.2
FY1975–76	9,019	2,289	2,164	1,588	73.4
Sex					
Male	56,463	9,878	8,788	6,202	70.6
Female	17,569	5,136	4,423	3,253	73.5
Race/Ethnic Group					
Minority Group[e]	1,405	1,404	1,268	796	62.8
White	72,627	13,610	11,943	8,659	72.5

[a]The sampling frame includes humanities doctorates from U.S. institutions only. Included in the sample, but not in this report, are humanities doctorates who were deceased, residing in foreign countries or CY1930–33 Ph.D.'s.

[b]The number assumed contacted equals the sample minus those individuals for whom no valid addresses could be obtained and persons known to be deceased prior to the 1977 survey.

[c]Responses include individuals found to be deceased and persons residing in foreign countries in 1977.

[d]Response rate "B" is the number of 1977 survey responses divided by the number assumed to have been contacted.

[e]Includes only those individuals whose ethnic group was known at the time the sample was selected.

The results are reported as percentages of the estimated 60,140 humanities Ph.D.'s[4] in the U.S. labor force in 1977[5] (Table 2). They indicated that 1) 90.5 percent (54,450) of the humanities Ph.D. labor force were employed full-time in 1977; 2) 4.8 percent (2,870) were full-time employed outside their Ph.D. field because, according to their response, a position in their field was not available; 3) 2.8 percent (1,670) were working part-time but seeking full-time employment (groups 2 and 3 are defined in this report as "underemployed"); and 4) approximately 3.3 percent (1,970) were unemployed and seeking work.[6]

TABLE 2 Employment Status of 1934-76 Humanities Ph.D.'s in the U.S. Labor Force, 1977

Employment Status	N	% of Labor Force
Total Labor Force	60,140	100.0
Full-Time Employed	54,450	90.5
F-T Empl. Outside Ph.D. Field[a]	*2,870*	*4.8*
Part-Time Employed	3,150	5.3
P-T Empl. and Seeking F-T Empl.	*1,670*	*2.8*
Postdoctoral Appointment	570	0.9
Unemployed and Seeking Empl.	1,970	3.3

[a]Because a position in their Ph.D. field was not available.

[4]The humanities population is defined as those with doctorates in the humanities fields, or languages and literature. A detailed list of broad fields of Ph.D. and subfields within each broad field is given in Appendix A as part of the 1977 questionnaire.

[5]The labor force includes those individuals who are employed, either full-time or part-time or on postdoctoral appointments, plus those who are unemployed and seeking work. Retired individuals or individuals who have voluntarily removed themselves from the job market are not included in the labor force estimates.

[6]The Bureau of Labor Statistics (BLS) of the U.S. Department of Labor reported an unemployment rate of 7.5 percent for the total U.S. labor force for February 1977.

These overall percentages alone fail to provide a complete picture of the employment and real work status of humanities Ph.D.'s in the U.S. labor force. By examining their demographic, salary, and employment characteristics, this report intends to provide a fuller and more useful statistical analysis of the 1977 humanities Ph.D. labor force. However, only from additional follow-up studies can the attitudes of humanities Ph.D.'s about their work situation, especially those unemployed or underemployed, be discerned.

* * * * * * * * * * * * * *

Although the Survey of Doctorate Recipients has been conducted on a biennial basis since 1973, Ph.D.'s in the humanities were not included until the 1977 survey. Nonetheless, with the completion of the 1979 survey, it will be possible to analyze the employment status of humanists over a two-year period. Studies that are currently planned for 1980 include an analysis of the employment of humanities doctorates by government and a career patterns report about women and minorities who hold humanities doctorates.

The data from the Survey of Doctorate Recipients provide a profile of the characteristics of humanities Ph.D.'s and raise a number of questions which further studies may be able to answer. How do the humanities Ph.D.'s who are working outside the academic setting feel about their employment? How do nonacademic employers regard humanities Ph.D.'s? What type of work does a humanities Ph.D. perceive as "working in the Ph.D. field"? How does Ph.D. training relate to work, especially for the nonacademically employed humanists?

1
Background Information about Humanities Ph.D.'s

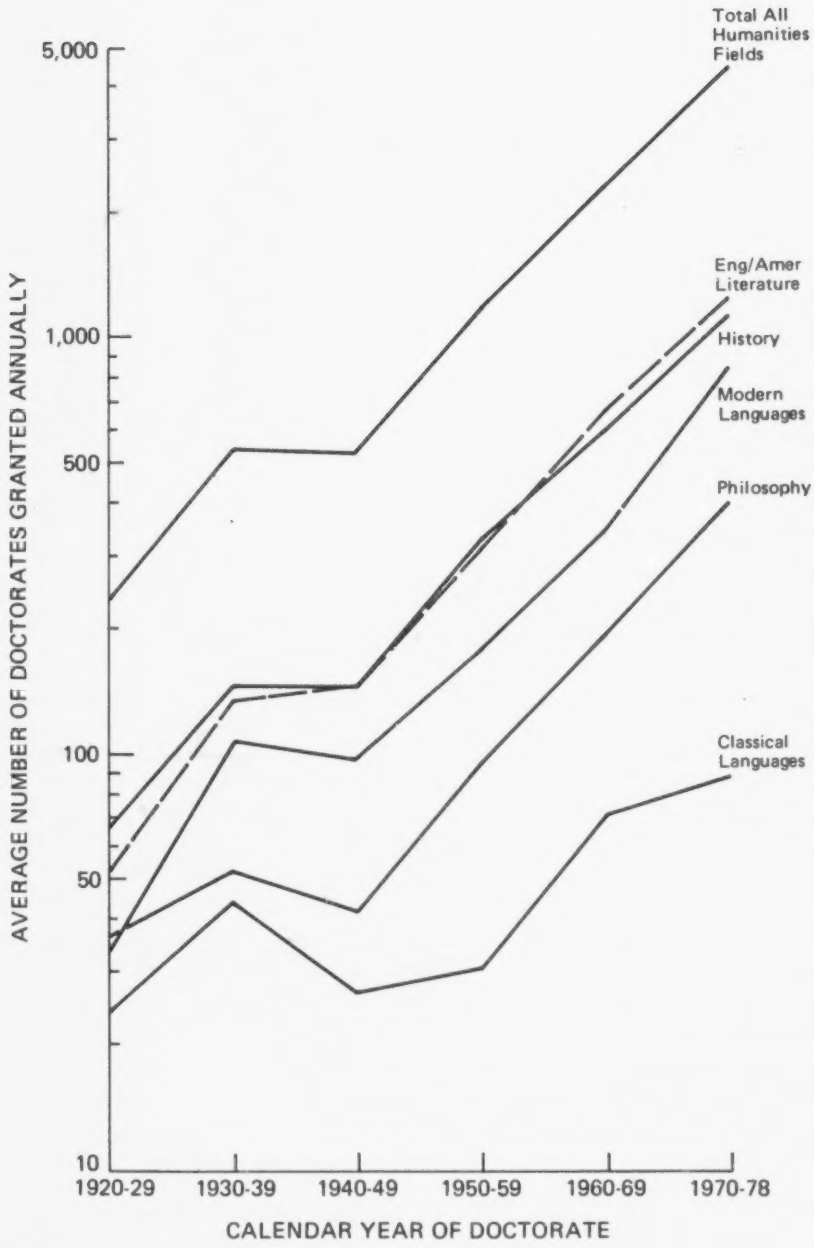
Total Number of Humanities Ph.D.'s, 1920-78

The number of Ph.D.'s awarded in the humanities has increased steadily from an average of about 250 per year during the 1920's to approximately 4,500 per year during the 1970's. More than 25 percent of the total number were awarded in the 1960's and over 44 percent in the 1970's.

Such changes in the number of Ph.D.'s awarded over time provide the background against which the 1977 Survey can best be interpreted. Data from the Doctorate Records File (DRF) are presented in Table 3 as well as Figures A and B to provide a broader perspective within which to view the 1977 employment data. Table 3 shows the percentages and numbers (total and within fields) for the entire time span (1920-78) during which these records have been maintained. Additional data giving the subfield breakouts are given in Appendix C.

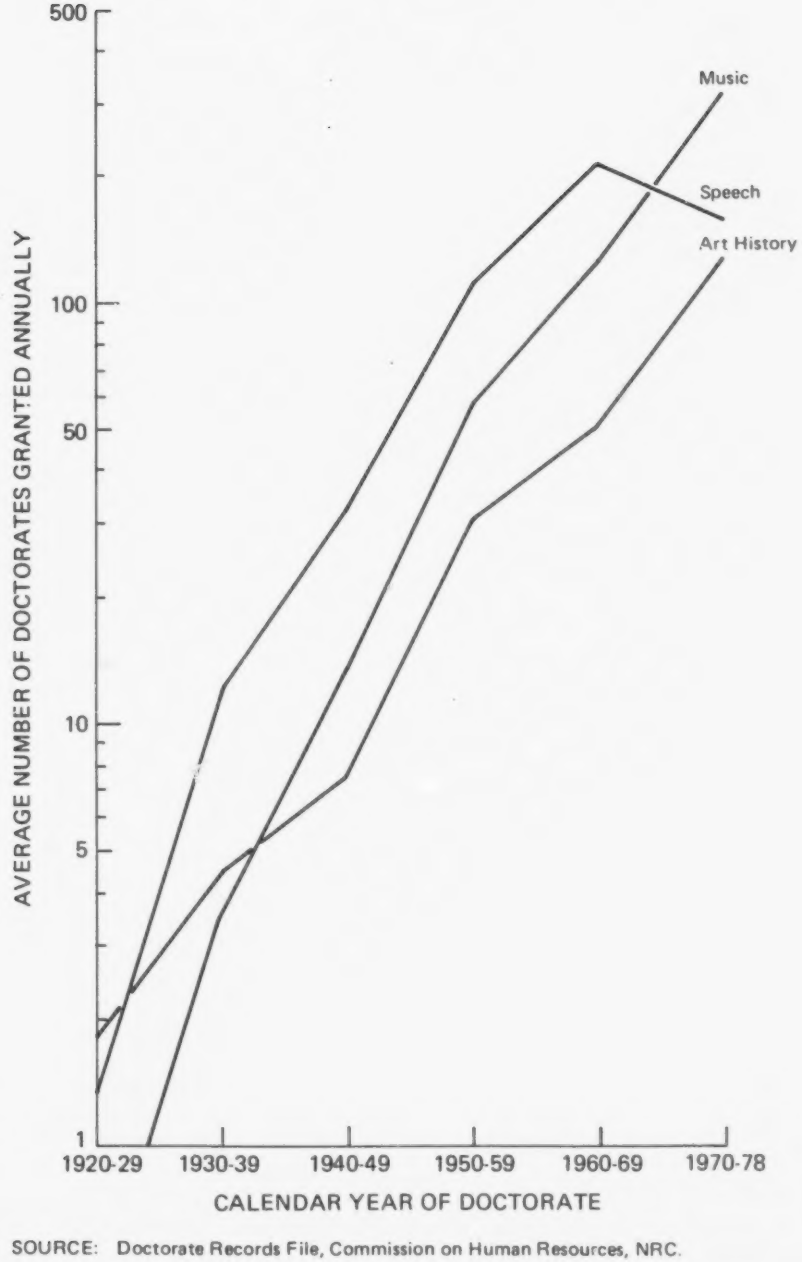
English/American literature and history, the two largest humanities fields (27.8 percent and 25.9 percent, respectively, of all 1920-78 humanities Ph.D.'s) were virtually parallel in growth, increasing from an average of approximately 50-65 Ph.D.'s awarded per year in the 1920's to what will be over 1,000 Ph.D.'s per year in the 1970's. The third largest field, modern languages, grew at an even more rapid rate, increasing from just over 30 Ph.D.'s awarded per year in the 1920's to more than 800 per year in the 1970's. Classical languages, however, moved up irregularly and more slowly from about 25 Ph.D.'s awarded per year to only about 85 per year.

Figure A's graphic presentation of selected fields shows that growth in most of the humanities fields over the 58-year period closely approximated that of the total



SOURCE: Doctorate Records File, Commission on Human Resources, NRC.

FIGURE A Number of Ph.D.'s Awarded in Selected Humanities Fields, 1920-78



SOURCE: Doctorate Records File, Commission on Human Resources, NRC.

FIGURE B Number of Ph.D.'s Awarded in the Smaller, Faster Growing Humanities Fields, 1920-78

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TABLE 3 Doctorates Awarded in the Humanities by Field and Year of Ph.D., 1920-1978

Year of Ph.D.	Total All Humanities Fields	Field of Doctorate: Hist	Art Hist	Music	Speech[a]	Phil	Other Humn	Engl/ Amer Lit	Class- ical Lang	Modern Lang
Total	85,760	22,200	2,040	4,740	5,090	7,590	2,710	23,820	2,710	14,860
Percentage of Total	(100.0)	(25.9)	(2.4)	(5.5)	(5.9)	(8.8)	(3.2)	(27.8)	(3.2)	(17.3)
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
CY1920-1929	2.7	3.0	0.9	0.0	0.3	4.8	6.7	2.2	8.9	2.3
CY1930-1939	6.1	6.5	2.2	0.7	2.4	6.9	6.4	5.7	16.2	7.2
CY1940-1949	6.0	6.4	3.7	2.9	6.4	5.6	2.9	6.0	9.9	6.6
CY1950-1959	13.5	14.6	15.0	12.0	21.8	12.4	5.3	13.3	11.3	12.0
CY1960-1969	26.9	26.6	25.2	26.4	42.8	25.4	16.9	27.9	26.4	23.3
CY1970-1978[b]	44.8	43.0	53.1	57.9	26.4	45.0	61.7	44.9	27.3	48.7
FY1970	4.6	4.9	4.0	3.5	5.2	4.7	5.9	4.6	3.2	4.4
FY1971	4.9	4.6	5.2	4.1	5.1	5.3	5.7	5.2	3.7	4.9
FY1972	5.3	5.2	4.0	4.6	4.9	5.1	7.9	5.7	3.9	5.5
FY1973	5.9	5.3	5.6	7.3	5.2	5.7	10.1	5.9	3.1	6.2
FY1974	5.7	5.2	6.1	7.9	2.7	5.9	10.2	5.7	3.2	6.0
FY1975	5.5	5.5	6.9	8.0	2.0	5.3	8.6	5.4	3.4	5.6
FY1976	5.4	5.2	7.1	7.5	1.9	5.5	5.4	5.1	2.9	6.7
FY1977	4.9	4.6	7.5	8.5	1.2	4.7	5.2	4.5	2.2	5.9
FY1978	4.4	4.1	7.4	7.8	1.4	4.1	4.9	4.3	2.5	5.1

[a]During 1920-1959 "speech" was treated as a single field. However, in the 1960's and 1970's other speech specialties appeared. Speech in the 1970's refers to "speech as a dramatic art."

[b]CY1978 includes counts on those Ph.D.'s awarded from January 1, 1978 through June 30, 1978 only.

SOURCE: Doctorate Re ·ords File, Commission on Human Resources, NRC.

for all humanities fields, with the single exception of classical languages, as noted. It is hypothesized that the overall lower rates in the 1940's were related to the manpower drain associated with World War II.

Figure B illustrates graphically the rather higher rate of growth in the smaller humanities fields (i.e., music, art history, and speech). For example, only one Ph.D. was awarded in music during the 1920's, whereas in the 1970's there were nearly 2,700. Art history increased from about 20 Ph.D.'s in the 1920's to over 1,000 in the 1970's.

The field of speech showed a decline in numbers of Ph.D.'s awarded in the 1970's. From 1920 to 1959, however, speech was classified as a single broad field. In the 1960's and 1970's, other speech specialties emerged (e.g., speech and hearing sciences, communications, speech education, theater and theater criticism) and many degree candidates who would have been classified as "speech majors" in the past opted for more specific speech categories outside the humanities field classifications.

The most recent information on growth rates, however, indicates that the number of humanities Ph.D.'s awarded has begun to decline (Table 3). The number of Ph.D.'s in history peaked in 1975 and modern languages in 1976 and both declined thereafter. The year-by-year analysis of the smaller humanities fields during the 1970's shows philosophy peaking in 1974, but declining thereafter. Music also grew rapidly in the early part of the decade, but then levelled off. Speech showed a decline in numbers, but again this is most likely a result of the field redefinition.[7] Although art history showed considerable fluctuation during the early 1970's, its overall growth rate steadily increased after 1972. And the 1970's saw the number of Ph.D.'s in classical languages actually decline from nearly 90 in 1970 to less than 70 in 1978.

1977 Survey of Doctorate Recipients

The remainder of this report will consider data

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[7]The 26.4 percent of Ph.D.'s in speech in the 1970's refers only to individuals who were awarded Ph.D.'s in "speech as a dramatic art."

concerning only a segment of the entire number (85,760) of humanities Ph.D.'s awarded between 1920 and 1978, namely those who earned degrees between 1934 and 1976 and who were in the U.S. labor force in February 1977 (N = 60,140). In all cases, the 1977 population estimates are given, except where the sample was too small for reliable estimates. These instances are noted in the text.

Humanities Ph.D.'s have been further classified in this report into four graduating cohorts, selected so as to maximize the information regarding recent graduates, as well as to show time trends during the period since the start of "the new academic depression" in the late 1960's. Since minor differences were found in the employment data for the cohorts prior to 1968, the entire 1934-68 period has been combined to form a single cohort, thereby increasing the number of cases and yielding more precise statistics. The second cohort, the Ph.D.'s of 1969-71, represents a period when the characteristics of Ph.D.'s, in particular employment, began to show the first changes in long established patterns of growth. The third cohort, 1972-74 Ph.D.'s, provides intermediate data. The final cohort, which includes 1975 and 1976 Ph.D.'s, provides information on the most recent graduates included in the 1977 survey.

Demographic Characteristics of Humanities Ph.D.'s

Tables 4 and 5 present characteristics -- age, sex, racial/ethnic identification, citizenship -- of 1934-76 humanities Ph.D.'s in the labor force by field of doctorate. Table 4 (sex demographics) shows total data for the years 1934-76, as well as a breakdown by cohorts. It is notable that in 1977 women comprised about one-quarter of the 60,140 humanities Ph.D.'s in the U.S. labor force. However, the ratio of men to women has varied substantially over the years. The percentage of Ph.D.'s awarded to women in the humanities has increased in recent years from 16.4 percent of the 1934-68 Ph.D.'s in the labor force to 34.3 percent of the 1975-76 cohort.

Although this progressive shift occurred in all fields, the rate of change varied considerably. For example, the percentage of Ph.D.'s in philosophy earned by women went from 12.1 percent of the 1934-68 Ph.D.'s in

TABLE 4 Humanities Ph.D.'s in the U.S. Labor Force by Sex, Field, and Year of Doctorate, 1977

Year of Ph.D. and Sex	Total All Humanities Fields	Field of Doctorate: Hist	Art Hist	Music	Speech	Phil	Other Humn	Engl/ Amer Lit	Class- ical Lang	Modern Lang
1934–1976 Total	60,140	16,100	1,370	3,540	3,540	5,370	1,690	16,790	1,540	10,200
Men	77.5	86.7	58.9	84.8	83.7	86.9	70.5	72.0	75.9	66.2
Women	22.5	13.3	41.1	15.2	16.3	13.1	29.5	28.0	24.1	33.8
1934–1968 Total	28,000	7,830	580	1,460	2,060	2,580	590	7,710	920	4,270
Men	83.6	89.6	70.7	89.6	87.2	87.9	80.6	79.4	79.4	76.9
Women	16.4	10.4	29.3	10.4	12.8	12.1	19.4	20.6	20.6	23.1
1969–1971 Total	10,490	2,810	240	510	690	880	270	3,050	200	1,840
Men	77.7	88.4	54.4	87.2	81.4	88.4	76.6	72.3	71.6	65.2
Women	22.3	11.6	45.6	12.8	18.6	11.6	23.4	27.7	28.4	34.8
1972–1974 Total	13,110	3,260	280	890	610	1,180	540	3,730	250	2,370
Men	71.8	84.0	53.0	80.3	78.3	86.2	61.0	64.6	70.6	59.1
Women	28.2	16.0	47.0	19.7	21.7	13.8	39.0	35.4	29.4	40.9
1975–1976 Total	8,540	2,200	270	680	180	730	290	2,300	170	1,720
Men	65.7	77.8	43.8	79.0	72.1	82.6	61.5	58.4	69.5	50.4
Women	34.3	22.2	56.2	21.0	27.9	17.4	38.5	41.6	30.5	49.6

TABLE 5 Demographic Characteristics of 1934–1976 Humanities Ph.D.'s in the U.S. Labor Force by Field of Doctorate, 1977

Demographic Characteristics	Total All Fields	Field of Doctorate: History	Art History	Music	Speech	Phil	Other Human	Engl/ Amer. Lit	Classical Langs	Modern Langs
Total Labor Force	60,140	16,100	1,370	3,540	3,540	5,370	1,690	16,790	1,540	10,200
	%	%	%	%	%	%	%	%	%	%
Race/Ethnic Group[a]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White/Caucasian	86.5	86.2	90.7	86.5	86.0	88.6	80.3	89.8	87.7	81.2
Minority Group	5.0	4.3	2.2	5.5	3.2	4.1	10.5	2.5	2.7	10.4
Hispanic	*2.2*	*1.3*	*0.5*	*1.0*	*0.8*	*1.0*	*4.4*	*0.7*	*0.5*	*7.6*
Black	*1.3*	*1.3*	*0.5*	*2.7*	*1.5*	*0.5*	*3.2*	*0.9*	*0.7*	*1.5*
Other Minorities[b]	*1.5*	*1.7*	*1.2*	*1.8*	*0.9*	*2.6*	*2.9*	*0.9*	*1.5*	*1.3*
No Report	8.5	9.5	7.1	8.1	10.8	7.3	9.2	7.7	9.6	8.3
Age in 1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 30	1.7	1.0	2.8	2.2	0.3	3.2	1.1	2.2	1.7	1.6
30–34	15.0	14.6	15.8	10.5	8.9	20.3	13.9	15.7	18.9	15.1
35–39	21.6	23.2	23.3	19.9	16.9	22.0	17.4	21.6	20.1	21.8
40–44	17.1	17.3	14.6	18.9	15.4	17.2	15.3	17.5	14.8	17.0
45–49	14.2	13.9	14.5	16.8	18.5	11.0	15.4	14.3	11.4	13.8
50–54	10.5	9.2	9.3	11.9	15.3	10.6	12.8	10.6	8.8	10.3
55–59	9.8	10.8	6.8	10.2	13.6	8.5	13.8	8.7	8.1	9.1
60–64	5.9	6.1	8.4	6.0	6.9	4.0	6.4	5.3	7.9	6.6
Over 64	3.4	3.1	3.6	2.9	2.5	2.7	3.5	3.4	7.3	3.9
No Report	0.8	0.8	0.9	0.7	1.7	0.6	0.4	0.8	1.0	0.9
Median Age	42.8	42.6	42.1	44.0	46.6	40.7	45.2	42.4	42.5	42.8
Citizenship	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S.[c]	97.5	98.3	97.5	98.4	99.4	96.9	95.0	98.8	96.4	94.0
Foreign	2.5	1.7	2.5	1.6	0.6	3.1	5.0	1.2	3.6	6.0

[a]Respondents who indicated both Hispanic ethnic background and race are included only under "Hispanic" in this table.
[b]Other Minorities include Asians, Pacific Islanders, American Indians, and Alaskan Natives.
[c]Includes persons whose citizenship is unknown.

the labor force to 17.4 percent of the 1975-76 graduates. In the classical languages, 20.6 percent of the 1934-68 Ph.D.'s in the labor force were women compared with 30.5 percent of the 1975-76 Ph.D.'s.

Other fields show more equal sex ratios for the most recent Ph.D. recipients in the 1977 labor force. The percentage of women earning Ph.D.'s in modern languages increased from 23.1 percent for the 1934-68 cohort's labor force to nearly 50 percent for the most recent graduates, while in art history women comprised 56.2 percent of the 1975-76 Ph.D.'s in the 1977 labor force.

In Table 5, the data on age again show the rapid increase in the number of Ph.D.'s awarded during the 1960's and 1970's. Table 5 also indicates that the median age for 1934-76 humanities Ph.D.'s in the U.S. labor force in 1977 was 42.8 years.[8] Median ages estimated for Ph.D.'s in the 1977 labor force vary from a low of 40.7 years in philosophy to a high of 46.6 years in speech. As might be predicted, the fast-growing fields, in general, have more young people, while fields like speech, which have declined in Ph.D. output in the past decade, have higher median ages.

In addition, Table 5 shows that about 5 percent of the humanities Ph.D.'s in the labor force in 1977 were minority group members. However, they comprised over 10 percent of the Ph.D.'s in modern languages and other humanities. The largest minority group was the Hispanics, with 2.2 percent for all fields, and 7.6 percent in modern languages. Although some Hispanics provided data on racial origin, the numbers were too small to present a statistically reliable estimate.

The vast majority of humanities Ph.D.'s in the U.S. labor force in 1977 were U.S. citizens, in contrast with the science and engineering fields, in which a significant proportion were foreign citizens. Overall, only 2.5 percent of the humanities Ph.D.'s surveyed in 1977 were non-U.S. citizens. The highest representation of foreign citizenship was found in the field of modern languages (6.0 percent) and the lowest in the field of speech (0.6 percent).

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[8]The median age for 1934-76 science/engineering Ph.D.'s in the U.S. labor force in 1977 was 40.8 years.

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In general, the 1977 SDR results documented the steady growth during this century in the numbers of Ph.D.'s awarded in all fields of the humanities, a growth which parallels that in the science fields. Variations in rate of growth from field to field and an increase in the proportion of women Ph.D.'s are notable aspects of this growth, which has slowed in the 1970's.

2
1977 Employment Status of All Humanities Ph.D.'s

Recent years have witnessed notable declines in employment among the most recent recipients of humanities Ph.D.'s as well as an increasing movement of these individuals into nontraditional fields of employment. The increasing rates of unemployment and field mobility of this highly trained segment of the U.S. population have given rise to concern not only among individuals in the humanities, but also the academic community, their principal employer. This chapter's general description of the employment status of Ph.D.'s in the humanities and analysis of their mobility is intended to shed some light on these concerns.

Overall Status in 1977

Table 6 sets the stage for such an overview with its comprehensive picture of the employment status of all humanities Ph.D.'s in the 1977 labor force: 90.5 percent were employed full-time, 5.3 percent were employed part-time, 0.9 percent held postdoctoral appointments and 3.3 percent were unemployed and seeking employment. It shows that the employment situation varied substantially between male and female Ph.D.'s in the humanities. Only 78.4 percent of the women were full-time employed, 13.2 percent were part-time employed, 1.3 percent held post-doctoral appointments, and 7.1 percent were unemployed and seeking employment in 1977. Of the nearly 2,000 humanities Ph.D.'s who were unemployed and seeking employment in 1977, almost half were women, albeit women constituted less than one-fourth of the total humanities Ph.D.'s labor force.

Table 6 also provides a detailed look at employment status by field and sex. Although the general picture for individual humanities fields is the same as that for all fields combined, significant differences exist from field

TABLE 6 Employment Status of 1934–1976 Humanities Ph.D.'s in the U.S. Labor Force by Sex and Field of Doctorate, 1977

Field of Doctorate	Sex	Number in Labor Force	Employment Status: Full-Time Employed	Part-Time Employed	Postdoc Appt	Unemployed/ Seeking Employment
		N	%	%	%	%
Total, All Fields	Both	60,140	90.5[a]	5.3	0.9	3.3
	Male	46,590	94.1	2.9	0.9	2.1
	Female	13,550	78.4	13.2	1.3	7.1
History	Both	16,100	92.1	3.9	1.1	2.9
	Male	13,950	94.8	2.6	0.9	1.7
	Female	2,150	74.9	12.4	2.3	10.4
Art History	Both	1,370	86.7	5.8	3.5	3.9
	Male	810	90.7	3.1	3.2	3.0
	Female	560	81.0	9.8	3.9	5.3
Music	Both	3,540	90.3	7.0	0.4	2.3
	Male	3,010	93.1	4.9	0.4	1.5
	Female	530	74.3	18.4	0.7	6.5
Speech	Both	3,540	95.5	3.6	0.0	0.9
	Male	2,960	98.0	1.8	0.0	0.2
	Female	580	82.6	13.2	0.0	4.2
Philosophy	Both	5,370	89.1	4.9	1.4	4.6
	Male	4,660	91.1	3.6	1.3	4.0
	Female	710	76.1	13.5	1.7	8.7
Other Humanities	Both	1,690	90.4	6.0	0.2	3.4
	Male	1,190	92.9	3.8	0.3	3.0
	Female	500	84.4	11.2	0.0	4.4
Engl/Amer Lit	Both	16,790	90.3	5.7	0.8	3.2
	Male	12,090	94.2	2.9	0.8	2.1
	Female	4,700	80.3	12.8	0.7	6.2
Classical Langs	Both	1,540	89.1	6.6	1.2	3.0
	Male	1,170	94.3	3.6	0.9	1.2
	Female	370	73.0	16.2	2.2	8.6
Modern Languages	Both	10,200	88.3	6.4	1.0	4.3
	Male	6,750	93.7	2.6	0.8	2.8
	Female	3,450	77.6	13.8	1.3	7.2

[a]Percentages sometimes do not add to 100 because of rounding.

to field when examined by sex. (In the smaller fields, the percentages are less exact because of the small numbers of cases in the sample, but a general trend is discernible.) In each field group, a smaller percentage of women were employed full-time (as low as 73 percent in classical languages) and a much higher percentage employed part-time (as high as 18.4 percent in music). The proportion of women who were unemployed and seeking employment ranged from a high of 10.4 percent in history to a low of 4.2 percent in speech.

Employment status information for the Ph.D. humanities labor force is broken down by year of Ph.D. and sex in Table 7. The decline in full-time employment is demonstrated in the survey data for both men and women. For the 1934-68 male Ph.D.'s the rate was 96.4 percent and for the 1975-76 Ph.D.'s the rate was 86.7 percent. The corresponding figures for women, 86.1 percent of the 1934-68 cohort and 68.5 of the 1975-76 Ph.D.'s, show that, at best, the women's rate was below the lowest rate shown for men.

TABLE 7 Employment Status of 1934-1976 Humanities Ph.D.'s in the U.S. Labor Force by Year of Doctorate and Sex, 1977

Sex	Year of Doctorate	Number in Labor Force	Employment Status: Full-Time Employed	Part-Time Employed	Post Doc Appt	Unemployed/ Seeking Employment
		N	%	%	%	%
Both Sexes	Total	60,140	90.5	5.3	0.9	3.3
	1934-1968	28,000	94.7	3.4	0.6	1.3
	1969-1971	10,480	91.0	4.3	1.3	3.4
	1972-1974	13,110	87.7	5.6	1.2	5.5
	1975-1976	8,550	80.5	12.1	1.3	6.2
Men	Total	46,590	94.1	2.9	0.9	2.1
	1934-1968	23,410	96.4	2.2	0.6	0.8
	1969-1971	8,150	94.3	2.3	1.2	2.1
	1972-1974	9,410	92.4	2.4	1.3	3.9
	1975-1976	5,620	86.7	8.0	0.7	4.6
Women	Total	13,550	78.4	13.2	1.3	7.1
	1934-1968	4,590	86.1	9.5	0.8	3.6
	1969-1971	2,330	79.6	11.2	1.6	7.6
	1972-1974	3,700	75.9	13.7	0.8	9.6
	1975-1976	2,930	68.5	19.8	2.5	9.2

There is a similar disparity between the sexes in the rate of change with regard to part-time employment. While each succeeding cohort showed a higher proportion of part-time employment for both sexes, male Ph.D.'s went from 2.2 percent for the 1934-68 cohort to 8 percent for the 1975-76 group. The female percentages of part-time employed increased at a lower rate, from 9.5 percent for the 1934-68 cohort to 19.8 percent for the 1975-76 Ph.D.'s. By any definition, it appears that substantial proportions of both sexes were unemployed or part-time employed in 1977 and that the situation was more severe for women.

Postdoctoral appointments for Ph.D.'s in the humanities are rare, as compared to the sciences, and have typically been given to older scholars. This situation appears to be changing, although less than 2 percent of

TABLE 8 Employment Status of Humanities Ph.D.'s in the U.S. Labor Force by Racial/Ethnic Group and Sex, 1977

Racial/Ethnic Group	Total	Employment Status			
		Full-Time Employed	Part-Time Employed	Post Doc Appt.	Unemployed/ Seeking Employment
	N	%	%	%	%
All Groups, Total	60,140	90.5	5.3	0.9	3.3
Men	46,590	94.1	2.9	0.8	2.1
Women	13,550	78.4	13.2	1.3	7.2
White, Total	52,050	90.4	5.4	1.0	3.3
Men	40,180	94.1	2.9	0.8	2.2
Women	11,870	77.9	13.7	1.5	6.9
Hispanic, Total	1,300	94.3	2.8	0.4	2.5
Men	920	97.9	1.5	0.5	0.0
Women	380	85.7	6.0	0.0	8.3
Black, Total	770	92.0	4.0	1.0	3.0
Men	550	94.0	3.3	1.3	1.5
Women	220	87.1	5.8	0.4	6.7
Other Minorities, Total[a]	900	88.1	4.4	1.6	5.9
Men	720	91.3	2.8	2.0	3.9
Women	180	75.0	11.1	0.0	13.9
No Report, Total	5,120	91.2	4.8	0.9	3.1
Men	4,220	93.6	3.4	1.1	1.9
Women	900	79.7	11.5	0.0	8.7

[a]Other Minorities include Asians, Pacific Islanders, American Indians, and Alaskan Natives.

any graduating cohort (with the exception of the 2.5 percent rate in the latest cohort of women) held postdoctoral appointments in 1977. The proportion of Ph.D.'s with postdoctoral appointments was largest in the field of art history, 3.5 percent.

Employment data for the racial/ethnic groups by sex again show that the sex difference pervades for all groups for which the samples were large enough for reliable statistics (Table 8). The racial/ethnic groups are essentially equal in unemployment rates, except for the Other Minorities group (i.e., Asians, Pacific Islanders, American Indians, and Alaskan Natives) of whom 5.9 percent were unemployed and seeking jobs.

Field Mobility of Humanities Ph.D.'s

In addition to increased unemployment and part-time employment, the 1977 SDR revealed another striking characteristic of the labor force of humanities Ph.D.'s: 15.4 percent of the 54,450 Ph.D.'s employed full-time indicated they were working outside their Ph.D. field (Table 9). In order to relate this figure to overall data, comparisons were made of humanities Ph.D.'s working full-time outside their field with those working within their field by sex, field of doctorate, type of employer, year of Ph.D., primary work activity, and salary. The reasons for humanities Ph.D.'s being employed in fields other than their Ph.D. field were also examined by employment sector and year of Ph.D.

Table 9's breakdown of the demographic characteristics indicates that the percentage of full-time employed female humanities Ph.D.'s working outside their Ph.D. field was slightly higher than that of men (17.6 percent of the women compared with 14.9 percent of the men).

In terms of age, it shows that Ph.D.'s in the 50-54 year age bracket were least frequently employed full-time outside their Ph.D. field (12.6 percent). The percentage of Ph.D.'s in the under-30 age bracket at 17.4 percent was slightly higher, but the highest of all was among Ph.D.'s aged 55 or older (17.8 to 22.8 percent). When viewed in terms of cohort, the most recent Ph.D.'s (1975-76 cohort) ranked highest (19.9 percent) in employment outside their Ph.D. field.

TABLE 9 Demographic Characteristics of Full-Time Employed Humanities Ph.D.'s by Employment Status Within or Outside Their Ph.D. Field, 1977

Demographic Characteristics	Employment Status: Total Full-Time Employed	Full-Time Outside PhD Field	Full-Time In PhD Field
	N	%	%
Total	54,450	15.4	84.6
Sex			
Male	43,830	14.9	85.1
Female	10,620	17.6	82.4
Racial/Ethnic Group			
White	47,050	15.7	84.3
Minority Group	2,730	13.5	86.5
No Report	4,670	13.8	86.2
Age in 1977			
Under 30	810	17.4	82.6
30-34	7,770	16.3	83.7
35-39	11,500	15.0	85.0
40-44	9,460	13.9	86.1
45-49	7,880	13.4	86.6
50-54	5,970	12.6	87.4
55-59	5,570	17.8	82.2
60-64	3,390	20.4	79.6
Over 64	1,660	22.8	77.2
No Report	440	16.1	83.9
Year of Doctorate			
1934-1968	26,520	15.2	84.8
1969-1971	9,550	14.4	85.6
1972-1974	11,500	14.2	85.8
1975-1976	6,880	19.9	80.1
Field of Doctorate			
History	14,830	19.9	80.1
Art History	1,190	5.6	94.4
Music	3,200	6.2	93.8
Speech	3,380	15.6	84.4
Philosophy	4,790	15.6	84.4
Other Humanities	1,530	15.8	84.2
English/American Literature	15,160	14.0	86.0
Classical Languages	1,370	24.4	75.6
Modern Languages	9,000	13.3	86.7

The largest spread was manifest in field of doctorate. A significantly higher percentage of the Ph.D.'s in history and the classical languages were employed full-time outside their Ph.D. field, 19.9 percent and 24.4 percent, respectively. Among Ph.D.'s in art history and music, however, only 5.6 percent and 6.2 percent, respectively, were working outside their fields.

Type of Employer

In Table 10 the type of employer of humanities Ph.D.'s employed full-time outside their Ph.D. field is compared with that of humanities Ph.D.'s who were working within their doctoral field in 1977. Only fifty percent of those humanities Ph.D.'s employed full-time outside their Ph.D. field were employed by academic institutions, whereas 95.1 percent of those employed within their Ph.D. field worked in academe. These percentages vary somewhat, but the general trend is consistent within all fields.

Within academe, universities employed approximately 60 percent of the full-time employed humanities Ph.D.'s working both within and outside their Ph.D. field. In the case of the Ph.D.'s in other languages, however, only 44 percent of those working outside their Ph.D. field in academe were employed by universities, with 48 percent employed by four-year colleges.

Approximately one-third of all the nonacademically employed humanities Ph.D.'s working within their field were employed by elementary and secondary schools. When viewed by field of doctorate, however, 75.7 percent of the Ph.D.'s in other languages, who were nonacademically employed within their Ph.D. field, were employed at elementary and secondary schools, while only 17.3 percent of the Ph.D.'s in other humanities were so employed.

Business and industry was the largest single nonacademic employer of humanities Ph.D.'s working outside their Ph.D. field, with the exception of Ph.D.'s in history, whose largest single employer was government.

Primary Work Activity

The primary work activity of humanities Ph.D.'s

TABLE 10 Employer Category of Full-Time Employed Humanities Ph.D.'s by Employment Within or Outside Their Ph.D. Field and Field of Doctorate, 1977.

Employer Category	Total All Fields		Field of Doctorate							
			History		Engl/Amer Lit		Other Languages		Other Humanities	
	In	Out	In	Out	In	Out	In	Out	In	Out
Total, Employed	46,040	8,390	11,870	2,960	13,040	2,120	8,850	1,530	12,300	1,780
In Academic Empl.	95.1	50.1	92.2	46.5	97.8	57.5	96.0	44.4	94.5	52.3
In Nonacademic Empl.	4.4	48.3	7.3	52.2	1.8	40.2	3.4	53.8	5.1	46.6
Employer Unknown	0.5	1.6	0.5	1.3	0.5	2.3	0.6	1.8	0.4	1.1
Total, Academic Empl.	43,810	4,210	10,950	1,380	12,750	1,220	8,490	680	11,620	930
University	61.7	57.3	59.6	60.7	58.4	67.4	65.2	43.9	64.6	48.9
4-Year College	33.3	33.2	33.4	29.0	36.2	25.6	31.7	47.8	31.3	38.7
2-Year College	5.0	9.5	7.0	10.3	5.4	7.0	3.1	8.3	4.1	12.4
Total, Nonacad. Empl.	2,020	4,040	860	1,540	230	850	300	820	630	830
Elem/Sec School	37.0	13.2	30.8	9.8	75.7	16.3	65.5	19.2	17.3	10.3
Business/Industry	12.0	31.8	6.5	25.0	11.3	38.9	7.9	37.6	22.0	31.6
Government	17.7	23.0	31.0	30.9	6.9	22.7	10.8	16.2	6.8	15.2
Other Employers	33.3	32.0	31.7	34.3	6.1	22.1	15.8	27.0	53.9	42.9

employed full-time within and outside their Ph.D. field is presented by employment category in Table 11. In academe, 81.1 percent overall of the full-time employed humanities Ph.D.'s working within their field were teaching in 1977 compared with 36.1 percent of those Ph.D.'s working outside their Ph.D. field. An interesting note is that these percentages were slightly lower for those employed in universities and noticeably higher for those at two-year colleges. As might be predicted, lower percentages of humanities Ph.D.'s working both within and outside their field in nonacademic jobs were engaged in teaching in 1977, 35.5 percent and 7.6 percent, respectively, although in elementary and secondary schools, 86.8 percent of the Ph.D.'s working within their field and 46.5 percent of those working outside their field were teaching in 1977.

Among humanities Ph.D.'s employed full-time outside their Ph.D. field, management/administration was the principal work function for 46.2 percent of those employed in academe and 28.5 percent of those employed in nonacademic jobs. As for the humanities Ph.D.'s working within their Ph.D. field, management/administration activities employed only 21.1 percent of those in non-academic jobs and 6.9 percent of those in academe.

For nonacademically employed humanities Ph.D.'s working outside their field, teaching was the principal work function at elementary and secondary schools (46.5 percent), while in industry, such Ph.D.'s were most frequently involved (39.9 percent) in other activities (principally marketing/production/inspection). Humanities Ph.D.'s working within their field in business/industry were engaged primarily in consulting or professional services (25 percent).

Mean Annual Salary of Humanities Ph.D.'s

Mean annual salaries of full-time employed humanities Ph.D.'s in 1977 varied significantly among the different employment categories. The highest mean annual salaries (see Table 12) were calculated for humanities Ph.D.'s employed in academic jobs outside their Ph.D. field ($24,200), and especially for those from the 1934-68 cohort ($28,000).

Table 12 also shows that the lowest mean annual

TABLE 11 Primary Work Activity of Full-Time Employed Humanities Ph.D.'s by Employment In/Outside of Ph.D. Field and Type of Employer, 1977

Primary Work Activity	Academically Employed							
	Total		Universities		4-Year Colleges		2-Year Colleges	
	In	Out	In	Out	In	Out	In	Out
Total	43,810	4,210	27,010	2,410	14,600	1,400	2,200	400
	%	%	%	%	%	%	%	%
Teaching	81.1	36.1	77.3	34.8	86.7	37.2	90.4	40.7
Mgmt/Admin	6.9	46.2	8.5	43.6	4.1	51.4	5.1	43.2
Writ/Edit	3.6	2.9	4.4	4.5	2.4	0.8	1.7	1.3
Conslt/Prof Servs.	0.3	4.6	0.2	5.1	0.3	4.2	0.4	3.0
Res. & Dev.	4.5	4.0	6.0	5.2	2.5	2.2	0.5	3.0
Other	0.9	3.4	1.0	4.6	0.8	2.1	0.0	0.5
No Report	2.8	2.8	2.6	2.2	3.1	2.1	1.9	8.3

Primary Work Activity	Nonacademically Employed									
	Total		Elem/Sec. Schools		Business/Industry		Government		Other Employers	
	In	Out	In	Out	In	Out	In	Out	In	Out
Total	2,020	4,040	750	530	240	1,290	360	930	670	1,290
	%	%	%	%	%	%	%	%	%	%
Teaching	35.5	7.6	86.8	46.5	0.4	0.8	4.7	2.8	7.7	1.9
Mgmt/Admin	21.1	28.5	4.0	28.1	16.0	11.9	26.7	39.8	39.0	37.2
Writ/Edit	12.3	11.3	2.8	0.4	18.4	19.5	23.1	8.1	14.8	9.9
Conslt/Prof Servs.	11.3	15.0	3.9	9.6	25.0	16.3	14.8	12.3	12.8	18.0
Res. & Dev.	8.7	7.2	0.8	2.3	16.4	5.0	19.5	10.1	9.1	9.2
Other	8.5	22.6	0.0	9.2	18.9	39.9	7.5	20.5	14.8	12.3
No Report	2.5	7.8	1.7	3.9	4.9	6.6	3.6	6.5	1.8	11.5

salaries were estimated for those humanities Ph.D.'s who were employed in nonacademic jobs outside their field, especially for the most recent cohort ($15,100). Interestingly enough, there was little salary variation within each cohort between academic and nonacademic employment of Ph.D.'s who were working within their fields.

TABLE 12 Mean Annual Salary of Full-Time Employed Humanities Ph.D.'s Working In/Outside Their Ph.D. Field by Employment Sector and Year of Doctorate, 1977 (in thousands of dollars)

Employment Sector	Total 1934-1976	Year of Doctorate 1934-68	1969-71	1972-74	1975-76
Academe					
Within	$22.1	$26.1	$19.8	$18.1	$16.3
Outside	24.2	28.0	23.0	17.6	15.8
Nonacademe					
Within	20.9	26.6	22.0	18.3	17.5
Outside	19.3	23.9	16.9	18.0	15.1

Recent Increases in Employment Outside the Ph.D. Field

In order to provide more insight into why the proportion of humanities Ph.D.'s working outside their field of doctorate has increased among recent Ph.D.'s, Table 13 brings together survey data on reasons given for such employment by all those so employed in 1977 by year of Ph.D. and type of employer.

A pattern of more or less choice in such employment decisions emerges. Ph.D.'s working in academe, for example, would appear to have more choice as to whether they worked within or outside their fields, as 30.4 percent of them did so because they preferred to be outside the field, 27 percent because they were promoted outside the field and only 24 percent because there was no available position within the field. Of Ph.D.'s in nonacademic employment, 44.6 percent worked outside their field because there was no available position within the field, 27.2 percent because they preferred a position outside the field, and only 3.8 percent because they were promoted outside the field.

Another factor that appears to have affected the

degree of choice was year of doctorate. Only 8.4 percent of those Ph.D.'s within academe and 21.2 percent of those nonacademically employed from the 1934-68 cohort worked outside their fields because a position within was not available. Of the 1975-76 cohort, however, 58.1 percent within academe and 69.3 percent outside academe were employed outside their Ph.D. field because a position within was not available to them.

Another interesting note is that neither location nor better pay were influential factors in employment decisions, within or outside academe and throughout all cohorts.

TABLE 13 Reason for Employment Outside Ph.D. Field for Humanities Ph.D.'s Full-Time Employed Outside Their Ph.D. Field by Employment Sector and Year of Doctorate, 1977

		Year of Doctorate			
Reason for Employment Outside Ph.D. Field	Total 1934 -76	1934 -68	1969 -71	1972 -74	1975 -76
Academically Employed	4,210	2,470	580	620	540
	%	%	%	%	%
Position in Fld. not Avail.	24.0	8.4	34.8	46.3	58.1
Prefer Non-Ph.D. Fld. Pos.	30.4	34.4	29.4	19.5	25.5
Promoted Out of Ph.D. Fld.	27.0	36.3	15.3	16.4	9.6
Better Pay	3.3	3.7	8.2	0.0	0.0
Locational Preference	2.5	2.7	1.7	4.5	0.0
Other	9.6	11.5	8.0	6.3	6.5
No Report	3.2	3.0	2.4	7.1	0.4
Nonacademically Employed	4,040	1,480	780	990	790
	%	%	%	%	%
Position in Fld. not Avail.	44.6	21.2	43.3	60.8	69.3
Prefer Non-Ph.D. Fld. Pos.	27.2	43.3	22.9	17.9	12.8
Promoted Out of Ph.D. Fld.	3.8	5.8	5.8	1.5	1.1
Better Pay	7.8	9.4	13.3	3.9	4.1
Locational Preference	4.4	4.4	3.7	6.4	2.5
Other	10.0	13.0	9.5	7.2	7.9
No Report	2.4	3.0	1.5	2.1	2.3

* * * * * * * * * * * * * *

Ph.D.'s in the humanities are a highly trained segment of the U.S. population for whom there is increasing unemployment and part-time employment, especially among women. This chapter's review of the demographic, work activity, and salary data on humanities Ph.D.'s shows that

one in six of those employed full-time in 1977 worked outside their doctorate field. Members of that group were more apt to be women, Ph.D.'s 55 years of age or older, 1975-76 degree recipients, Ph.D.'s in the fields of history or classical languages, and employees in nonacademic positions.

The major reason given by the most recent Ph.D. recipients for working outside their Ph.D. field in 1977 was that a position in their field was not available, whereas the older cohort of Ph.D.'s indicated they were working outside their field because they either preferred or were promoted to the position.

3
1977 Employment Status of 1972-76 Humanities Ph.D.'s

In light of recent changes in the number of Ph.D.'s awarded in the humanities and their employment, an appropriate perspective on the data in this report calls for a more detailed look at the employment picture of the most recent humanities Ph.D.'s--those awarded degrees between 1972 and 1976. These details emerge through 1) a comparison of such employment information as type of employer and primary work activity of recent Ph.D.'s (as given by respondents in the 1977 Survey of Doctorate Recipients) with their anticipated employment plans at the time the doctorate degree was granted (as given in the Survey of Earned Doctorates questionnaire) and 2) an examination of the rates of unemployment and underemployment for these recent humanities Ph.D.'s by sex, age, field of doctorate, geographic location, employer category, and primary work activity.

A Comparison of Anticipated and Actual Employment

The 1977 employment status of both those recent Ph.D.'s who had jobs and those who were seeking jobs at the time they received their degrees is given in Table 14. It indicates that 94.1 percent of the recent male Ph.D.'s who reported that they had jobs when they received their degrees were employed full-time in 1977; adding in the 1.5 percent who were part-time employed brings this percentage to 95.6. The comparative figure for recent female Ph.D.'s who indicated they had jobs when they graduated is 91.6 percent, including 8.9 percent in part-time employment.

Perhaps even more interesting is the 1977 employment status of the recent Ph.D.'s who indicated they had jobs at four-year colleges or universities when they graduated. In the 1977 survey, a total of 89.1 percent of the men and 86.3 percent of the women were still so

employed (full-time and part-time) in these most desired jobs. These figures include again the 1.1 percent of the men and 6 percent of the women who were employed part-time in four-year colleges and universities in 1977.

TABLE 14 Graduation Employment Plans by Sex and Subsequent Type of Employer for 1972-1976 Humanities Ph.D.'s, 1977

1977 Employment Status	Employment Plans at Time of Graduation							
	All Employment Plans				4-Yr Coll/Univ Employment Plans			
	Had Job[a]		Seeking Empl[b]		Had Job[c]		Seeking Empl[d]	
	M	F	M	F	M	F	M	F
Total 1972-1976 Ph.D.'s	10,500	3,990	3,410	2,240	8,710	3,450	2,470	1,550
	%	%	%	%	%	%	%	%
Full-Time Employed	**94.1**	**82.7**	**77.3**	**50.6**	94.3	84.5	78.0	53.9
University	*43.7*	*41.5*	*27.0*	*19.7*	**51.7**	**46.8**	**29.9**	**21.3**
4-Year College	*31.2*	*29.4*	*19.2*	*14.1*	**36.3**	**33.5**	**22.5**	**16.6**
2-Year College	*6.8*	*5.4*	*6.2*	*3.9*	*1.4*	*1.3*	*5.1*	*4.1*
Elem/Sec School	*3.2*	*1.7*	*4.0*	*3.3*	*0.4*	*0.0*	*3.3*	*3.5*
Business/Industry	*1.9*	*1.6*	*8.1*	*4.5*	*0.8*	*1.2*	*8.2*	*4.6*
Government	*3.2*	*1.5*	*6.9*	*2.4*	*1.7*	*0.9*	*4.4*	*2.3*
Other/Unknown	*4.1*	*1.7*	*6.0*	*2.7*	*2.0*	*0.9*	*4.7*	*1.6*
Part-Time Employed	**1.5**	**8.9**	**10.1**	**24.7**	1.6	7.8	10.2	23.9
Univ/4-Yr College	*0.9*	*5.9*	*4.5*	*15.5*	**1.1**	**6.0**	**5.4**	**16.6**
Other/Unknown	*0.6*	*3.0*	*5.6*	*9.2*	*0.5*	*1.8*	*4.8*	*7.3*
Post-doctoral Appt.	1.0	0.8	1.2	1.7	1.2	1.0	0.9	1.9
Unemployed and Seeking	2.0	3.1	9.2	15.5	1.6	2.7	8.5	14.4
Not in Labor Force	1.2	3.6	2.0	6.9	1.3	3.5	2.4	5.9
Unknown Empl. Status	0.2	0.8	0.1	0.7	0.1	0.6	0.0	0.0

[a]Ph.D.'s who had a job at the time they received their doctoral degree.
[b]Ph.D.'s who were seeking employment at the time they received their doctoral degree.
[c]Ph.D.'s who had a job at a university or four-year college at the time they received their doctoral degree.
[d]Ph.D.'s who were seeking employment, preferably at a university or four-year college at the time they received their doctoral degree.

Of those recent Ph.D.'s who were still seeking employment when they received their degrees, 77.3 percent of the men and 50.6 percent of the women were employed full-time in 1977. The much higher part-time employment figures of 10.1 percent for men and 24.7 percent for women bring these percentages to 87.4 and 75.3, respectively.

However, in the case of 1972-76 humanities doctorates who were seeking employment at four-year colleges and universities but had no firm jobs when they graduated, only 57.8 percent of the men and 54.5 percent of the women were employed either full-time or part-time in universities or four-year colleges. Of this same group, 8.5 percent of the men and 14.4 percent of the women were unemployed

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and seeking employment in 1977. By comparison, the 1977 unemployment rate was 1.6 percent for men and 2.7 percent for women from the group who were employed in four-year colleges and universities at the time of graduation.

Primary Work Activity

Over 70 percent of the recent male Ph.D.'s and 65 percent of the recent female Ph.D.'s who had jobs when they graduated were principally engaged in full-time teaching in 1977 (Table 15). An additional 0.8 percent of the men and 6.7 percent of the women were part-time teachers.

For those 1972-76 Ph.D.'s who had teaching jobs at graduation, however, even higher percentages were still so employed in 1977: 78.7 percent of the men and 68.8 percent of the women in full-time teaching plus an additional 1.0 percent of the men and 6.5 percent of the women in part-time teaching. Of those who were seeking teaching jobs at the time of graduation, only 52.2 percent of the men and 34.4 percent of the women were actually employed in full-time teaching jobs in 1977; about 10 percent of the men and 27 percent of the women were employed part-time, chiefly in teaching.

TABLE 15 Graduation Employment Plans by Sex and Subsequent Primary Work Activity for 1972-1976 Humanities Ph.D.'s, 1977

1977 Primary Work Activity	Employment Plans at Time of Graduation							
	All Employment Plans				Employment in Teaching Plans			
	Had Job[a]		Seeking Empl[b]		Had Job[c]		Seeking Empl[d]	
	M	F	M	F	M	F	M	F
Total 1972-1976 Ph.D.'s	10,500	3,990	3,410	2,240	8,840	3,440	2,520	1,510
	%	%	%	%	%	%	%	%
Full-Time Employed	94.1	82.7	77.3	50.6	94.5	83.9	78.6	49.9
Teaching	*72.4*	*64.5*	*47.1*	*31.2*	**78.7**	**68.8**	**52.2**	**34.4**
Research	*2.4*	*2.8*	*3.0*	*1.4*	*2.4*	*2.9*	*2.5*	*1.2*
Management/Adminstration	*7.3*	*7.2*	*9.3*	*4.9*	*4.7*	*5.1*	*7.9*	*4.0*
Consulting/Prof. Services	*2.5*	*0.7*	*3.1*	*1.5*	*1.4*	*0.6*	*2.7*	*1.1*
Writing/Editing	*4.5*	*2.9*	*4.3*	*4.2*	*3.2*	*2.1*	*3.4*	*1.7*
Other/Unknown	*5.0*	*4.6*	*10.6*	*7.3*	*4.1*	*4.4*	*9.9*	*7.5*
Part-Time Employed	1.5	8.9	10.1	24.7	1.4	7.8	9.7	27.8
Teaching	*0.8*	*6.7*	*5.9*	*17.5*	**1.0**	**6.5**	**6.6**	**22.7**
Other/Unknown	*0.7*	*2.2*	*4.2*	*7.2*	*0.4*	*1.3*	*3.1*	*5.1*
Post-doctoral Appt.	1.0	0.8	1.2	1.7	1.0	0.8	0.6	0.9
Unemployed and Seeking	2.0	3.1	9.2	15.5	2.0	3.3	8.7	14.1
Not in Labor Force	1.2	3.6	2.0	6.9	0.9	3.4	2.4	6.3
Unknown Empl. Status	0.2	0.8	0.1	0.7	0.1	0.9	0.0	1.0

[a] Ph.D.'s who had a job at the time they received their doctoral degree.
[b] Ph.D.'s who were seeking employment at the time they received their doctoral degree.
[c] Ph.D.'s who had a teaching job at the time they received their doctoral degree.
[d] Ph.D.'s who were seeking a teaching job at the time they received their doctoral degree.

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Involuntary Unemployment and Underemployment of 1972-1976 Humanities Ph.D.'s

In 1977, approximately 16.7 percent of the 1972-76 male Ph.D.'s and 27.7 percent of the female Ph.D.'s in the humanities doctoral labor force were underemployed or unemployed and seeking employment (Figure C). In all fields, there were larger percentages of female than male 1972-76 humanities doctorates unemployed and seeking employment or working part-time and seeking full-time employment.

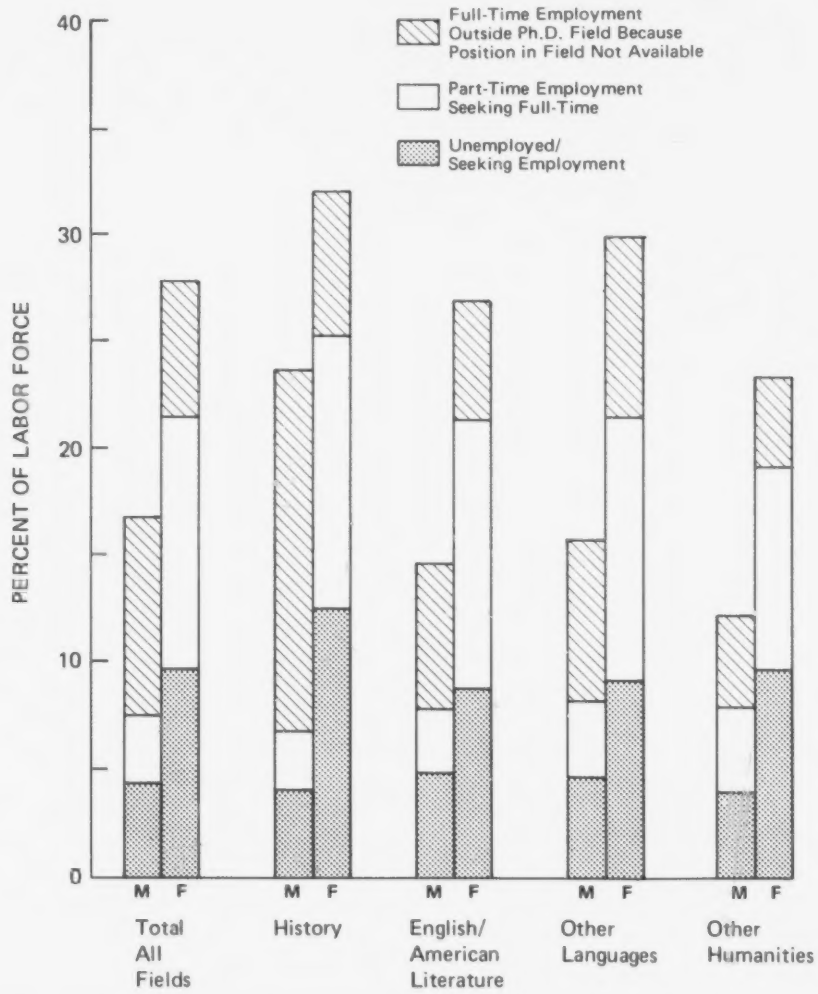

FIGURE C Unemployed and Underemployed 1972-76 Humanities Ph.D.'s in the U.S. Labor Force by Sex and Field of Doctorate, 1977

In the case of those who indicated they were full-time employed outside their Ph.D. field because a position within the field was not available, the percentages for men were higher than those for women. This appears to be related to employment differences from field to field. For example, a significantly higher percentage of recent male Ph.D.'s in history (16.5 percent) were involuntarily employed full-time outside their Ph.D. field, compared with both men and women in all other Ph.D. fields (Table 16).

TABLE 16 Employment Status of 1972-1976 Humanities Ph.D.'s by Sex and Field of Doctorate, 1977

			1977 Employment Status					
	Labor Force		Unemp. Seeking Empl.		F-T Outside PhD Field Because Position in Fld. Not Available		P-T Empl/ Seeking F-T.	
Field of Doctorate	M	F	M	F	M	F	M	F
	N	N	%	%	%	%	%	%
Total, All Fields	15,030	6,630	4.2	9.4	9.2	6.3	3.3	12.0
History	4,450	1,010	4.0	12.5	16.5	6.7	2.9	12.6
Engl/Amer Lit	3,760	2,280	4.5	8.3	6.8	5.6	3.2	12.9
Other Languages[a]	2,560	1,950	4.4	9.1	8.0	8.6	3.5	12.3
Other Humanities[b]	4,260	1,390	3.9	9.6	4.5	3.8	3.9	9.6

[a]'Other Languages' includes classical and modern languages.
[b]'Other Humanities' includes art history, music, speech, philosophy, and other humanities.

Employment Status and Age of Ph.D.

In Table 17, the 1977 employment status of recent humanities Ph.D.'s is broken down by age and sex. It shows that for females the unemployment rate was highest in the under-40 group, whereas for males, it was remarkably steady (between 3.7 and 3.9 percent) up to age 45, when it increased to 8.1 percent.

In the two types of underemployment, it is notable that for men under 40 compared to other male age groups (and compared to women under 40) much larger percentages were employed full-time outside the Ph.D. field because a position was not available. For both males and females, employment outside the Ph.D. field was lowest at ages 45-49. As for those employed part-time and seeking employment, the percentages for men were small and decreased steadily in each succeeding cohort. In contrast, the part-time employment rate was much higher for women in all age

groups and peaked among women age 40-49.

TABLE 17 Employment Status by Age and Sex for 1972-1976 Humanities Ph.D.'s, 1977

			1977 Employment Status					
	Labor Force		Unemployed/ Seeking Empl.		F-T Outside Ph.D. Field[a]		Part-Time Seeking F-T	
Age	M	F	M	F	M	F	M	F
	N	N	%	%	%	%	%	%
Total[b]	15,030	6,630	4.2	9.4	9.2	6.3	3.3	12.0
34 or under	6,090	2,700	3.8	9.6	10.8	6.5	4.4	11.0
35-39	4,990	1,690	3.7	14.1	10.4	5.1	3.1	10.4
40-44	2,370	800	3.9	4.3	6.3	9.2	2.3	17.5
45-49	880	620	8.1	5.0	0.2	3.9	1.6	15.4
50 or older	700	820	7.0	7.6	8.3	6.8	0.7	10.2

[a]Includes only those persons who are full-time employed outside their Ph.D. field because a position in their field was not available.
[b]Includes those cases for whom age was not reported.

Employment Status and Geographic Location

In Figure D, the labor force of 1972-76 Ph.D.'s in the humanities has been divided according to the percentage of unemployed within each U.S. Census region. Percentages are indicated in Table 18 for unemployed and underemployed in each region. The data, however, are descriptive and do not attempt to explain why rates are high for one region and low for another or how rates are related to the Ph.D.'s unwillingness to relocate to a region where job opportunities are more plentiful.

The unemployment rate was highest in the Middle Atlantic states (8.2 percent) and lowest in the East South Central states (3.5 percent). Recent Ph.D.'s in the New England states and the West North Central states, where both the unemployment and underemployment rates were among the lowest of all regions, appear to have a better job situation than those in the Middle Atlantic and Pacific regions, where the recent Ph.D.'s experienced difficulty in finding full-time work both within and outside the Ph.D. field. In contrast, in the East South Central region, where the unemployment rate was only 3.5 percent, recent Ph.D.'s seemed to have a better chance of finding full-time employment, but they often accepted jobs that were outside their Ph.D. field (Table 18).

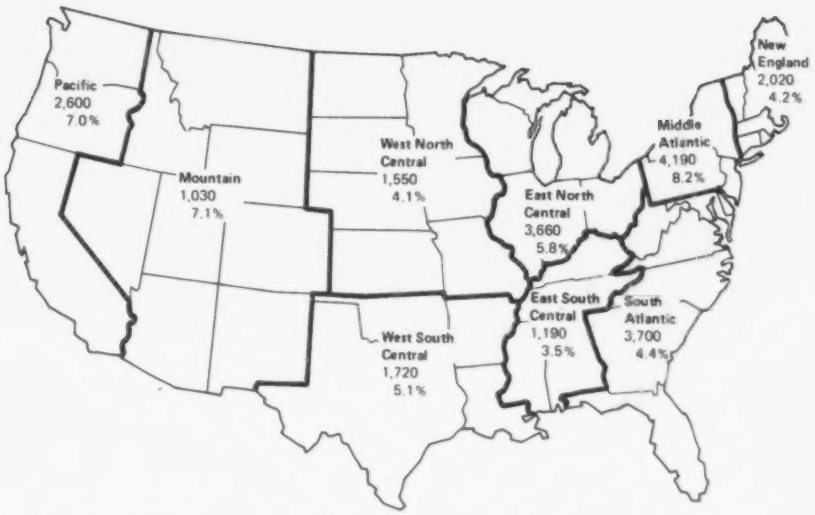

FIGURE D 1972-76 Humanities Ph.D.'s in the Labor Force and Unemployment Rates by Geographic Region, 1977

TABLE 18 Employment Status of 1972-1976 Humanities Ph.D.'s Within Geographic Location, 1977

1977 Geographic Location	Labor Force	1977 Employment Status		
		Unemployed, Seeking Empl.	F-T Outside Ph.D. Field[a]	Part-Time Seeking F-T
	N	%	%	%
Total, U.S.	21,660	5.8	8.3	6.0
New England	2,020	4.2	6.7	3.9
Middle Atlantic	4,190	8.2	10.1	6.8
East North Central	3,660	5.8	9.7	6.6
West North Central	1,550	4.1	5.2	3.4
South Atlantic	3,700	4.4	6.3	6.2
East South Central	1,190	3.5	11.1	5.2
West South Central	1,720	5.1	9.7	5.0
Mountain	1,030	7.1	5.3	6.0
Pacific	2,600	7.0	8.5	7.6

[a]Includes only those persons who were full-time employed outside their Ph.D. field because a position in their field was not available.

Type of Employer and Employment Status

Figure E illustrates the 1977 distribution of 1972-76 graduates among various employers and compares the total employment distribution with that of the two underemployed groups. It shows that nearly 83 percent of the employed humanities Ph.D.'s were in academe, with the percentages in nonacademic employment almost equally divided among business/industry, government, elementary/secondary schools, and other employers. Of the recent humanities Ph.D.'s who were employed part-time and seeking full-time employment in 1977, 77.6 percent were employed in academe, 10.4 percent in business and industry, and far lesser percentages in all other types of employment.

A more diverse employment picture emerges for those recent humanities Ph.D.'s employed full-time outside their Ph.D. field because a position in the field was not available. Only 33.5 percent of the Ph.D.'s in this category were employed in academe, where few positions would be available outside the field except in administration. On the other hand, although they employed few humanists *per se* (N = 3,400), nonacademic employers did not seem reluctant to employ humanists outside their field, probably because the connection between the subject matter and the nature of the work is not as important as are analytical skills, broad managerial abilities, etc. Business and industry employed 21.7 percent of the humanities Ph.D.'s who were in positions outside the doctorate field; government, 20.3 percent; elementary/secondary schools, 7.4 percent; and other employers, 17.1 percent.

Viewed from another vantage, 1977 underemployment in academe was largely part-time employment for those wanting full-time jobs, whereas, underemployment in nonacademic settings was mostly employment outside the field of specialization.

Primary Work Activity and Employment Status

The primary work activity of recent humanities Ph.D.'s according to their employment status in 1977 is presented in Table 19. Teaching was the primary work function of over 70 percent of all employed 1972-76 humanities Ph.D.'s and 68.6 percent of those part-time

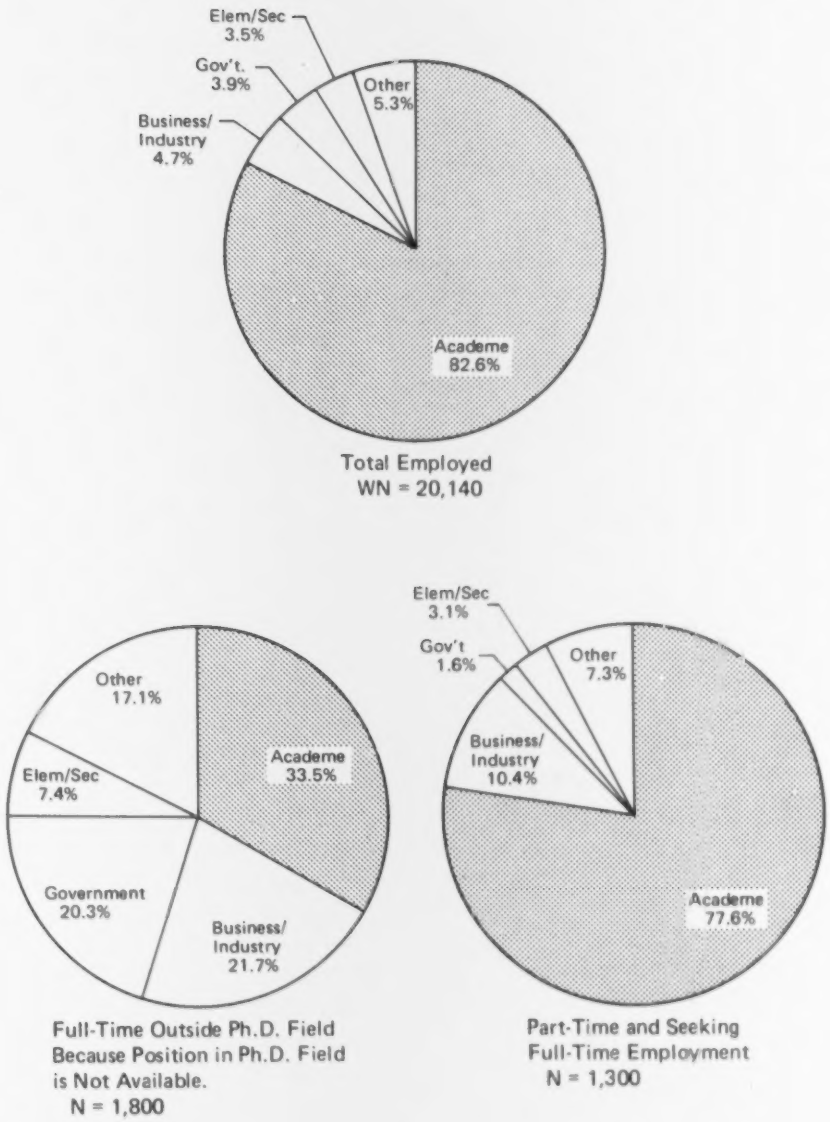

FIGURE E Percentage Distribution of 1972-76 Humanities Ph.D.'s by Employment Status and Type of Employer, 1977

employed and seeking full-time employment. This is not surprising because academe was the major employer for Ph.D.'s in these two groups (Figure E). However, among those Ph.D.'s who were involuntarily employed full-time outside their Ph.D. field, only 20.7 percent were in teaching, while 23.8 percent were in management and administration and the rest in such other services as writing, editing, and consulting. Again, this is consistent with the fact that the majority of those employed outside their Ph.D. field were working in nonacademic settings.

TABLE 19 Percentage in Each Primary Work Activity by Employment Status, 1972-1976 Full- and Part-Time Employed Humanities Ph.D.'s, 1977

		1977 Employment Status	
Primary Work Activity	Total Employed[a]	Part-Time Seeking Full-Time Employment	Full-Time Outside Ph.D. Field[b]
Total	20,140	1,300	1,800
	%	%	%
Teaching	72.2	68.6	20.7
Research/Design/Develop	3.9	4.0	4.9
Management/Administration	8.0	0.9	23.8
Writing/Editing	5.3	9.6	11.7
Consult/Prof. Svcs.	2.9	3.0	11.5
Other	4.5	9.4	19.5
No Report	3.2	4.4	7.9

[a]Includes only those Ph.D.'s who indicated in 1977 they were full- or part-time employed, excluding postdoctoral appointments.
[b]Includes only those Ph.D.'s who were full-time employed outside their Ph.D. field because a position in their field was not available.

* * * * * * * * * * * * * *

Differences in the employment status of humanities Ph.D.'s are most evident in the data reviewed in this chapter. The picture varies greatly between the sexes, from field to field, and from one geographical location to another. Overall, however, not only were 1972-76 humanities Ph.D. recipients having difficulty finding employment at universities and four-year colleges at the time of graduation, but of those 1972-76 humanists employed by universities and four-year colleges at the time of graduation, only 85 percent were still so employed in 1977.

4
Humanities Ph.D.'s in Academic Employment

Since almost 90 percent of the humanities Ph.D.'s who were working either full-time or part-time in 1977 were academically employed,[9] the characteristics of this group--sex, faculty rank, primary work activity, and salary--merit a careful look within this report.

The total number of employed humanities doctorates (either full-time or part-time) in 1977 was 57,600, of whom 45,200 (78.5 percent) were men and 12,400 (21.5 percent) were women (Table 20). Of these, 87.8 percent of the men and 85.5 percent of the women were employed in institutions of higher education (universities, two-year and four-year colleges). The percentage of women employed at universities (45.8 percent) was much lower than that of men (54.7 percent). The proportions were reversed in two-year colleges, which employed 4.5 percent of the men and 7.2 percent of the women.

TABLE 20 Academic Employment for Full- and Part-Time Employed Humanities Ph.D.'s by Sex, 1977.

			Academe		
	Total Employed	Employed In Academe	Univ.	4-yr Coll	2-yr Coll
	N	%	%	%	%
Total	57,600	87.3	52.7	29.4	5.1
Men	45,200	87.8	54.7	28.6	4.5
Women	12,400	85.5	45.8	32.5	7.2

[9]For the purpose of this report academic employment includes part-time and full-time employment (exclusive of postdoctoral appointments) in universities, two-year and four-year colleges (exclusive of medical schools).

Other differences in male-female distributions were found when the percentages of employed humanists in academe were examined by sex and year of doctorate. For example, for all humanities fields combined, 91.7 percent of the 1934-68 male Ph.D.'s were academically employed compared to 85.8 percent of the women. In the case of the 1972-76 Ph.D.'s, however, higher percentages of women than men were academically employed (Table 21).

TABLE 21 Percentage of Full-Time and Part-Time Employed Humanities Ph.D.'s in Academe by Sex and Year of Doctorate, 1977

		Year of Doctorate			
Sex	Total 1934-76	1934 -68	1969 -71	1972 -74	1975 -76
Total Employed	57,600	27,470	9,990	12,230	7,910
% in Academe	87.3	90.7	87.3	84.9	79.2
Men Employed	45,200	23,080	7,880	8,920	5,320
% in Academe	87.8	91.7	88.0	84.5	76.3
Women Employed	12,400	4,390	2,110	3,310	2,590
% in Academe	85.5	85.8	84.9	85.7	85.0

Universities and Colleges as Employers

Both Table 21 and Table 22 reflect a decline in academic employment for recent humanities Ph.D.'s. This has been especially true in employment of men, for whom 91.7 percent of the employed 1934-68 Ph.D.'s were in academe in 1977 compared with only 76.3 percent of the employed 1975-76 male Ph.D.'s. While the greater declines in university employment of recent Ph.D.'s have been offset somewhat by a few increases at four-year and two-year colleges (notably, employment at four-year colleges for Ph.D.'s in other languages has increased from 24.8 percent for 1934-68 graduates to 35.9 percent for the 1975-76 Ph.D.'s), the trend has been fairly general in all fields (Table 22). The particular difficulties of recent Ph.D.'s in history are reflected in the greatest percentage change, from 89.8 percent of the 1934-68 Ph.D.'s employed in academe to 69.9 percent of the 1975-76 graduates. Recent history Ph.D.'s also have the largest percentage of employment at two-year colleges (12.5 percent).

TABLE 22 Type of Academic Employer by Cohort and Field of Doctorate for Full-Time and Part-Time Employed Humanities Ph.D.'s, 1977

Field of Doctorate/Employer	Total 1934 -76	Year of Doctorate 1934 -68	1969 -71	1972 -74	1975 -76
All Fields					
Total Employed	57,600	27,470	9,990	12,230	7,910
Academic	87.3	90.7	87.3	84.9	79.2
Univ.	*52.7*	*60.0*	*51.1*	*45.2*	*41.1*
4-Year College	*29.4*	*27.5*	*30.8*	*32.7*	*29.5*
2-Year College	*5.1*	*3.2*	*5.4*	*6.9*	*8.6*
History, Total Employed	15,450	7,680	2,670	3,050	2,050
Academic	82.6	89.8	82.9	73.0	69.9
Univ.	*48.9*	*59.3*	*46.2*	*34.7*	*34.4*
4-Year College	*27.7*	*27.5*	*28.2*	*30.7*	*23.0*
2-Year College	*6.1*	*3.0*	*8.5*	*7.6*	*12.5*
Engl/Amer. Lit, Total Employed	16,120	7,570	2,950	3,460	2,140
Academic	90.8	93.8	91.9	88.3	83.0
Univ.	*53.0*	*58.9*	*51.7*	*46.5*	*44.4*
4-Year College	*32.2*	*31.8*	*34.6*	*33.4*	*28.7*
2-Year College	*5.6*	*3.1*	*5.6*	*8.4*	*9.9*
Other Langs, Total Employed	11,130	5,090	1,880	2,440	1,720
Academic	87.3	89.9	83.9	88.0	82.3
Univ.	*54.6*	*62.0*	*51.7*	*51.2*	*41.0*
4-Year College	*29.1*	*24.8*	*30.1*	*32.6*	*35.9*
2-Year College	*3.5*	*3.1*	*2.2*	*4.2*	*5.3*
Other Humanities, Total Empl.	14,900	7,130	2,490	3,280	2,000
Academic	88.3	89.1	89.2	89.9	81.8
Univ.	*55.1*	*60.7*	*55.4*	*49.1*	*44.3*
4-Year College	*28.5*	*24.8*	*29.7*	*34.0*	*31.4*
2-Year College	*4.7*	*3.6*	*4.2*	*6.8*	*6.1*

TABLE 23 Ranks for Academically Employed Humanities Ph.D.'s by Sex, Year of Ph.D., and Field of Doctorate, 1977

Field of Doctorate and Rank	Total Academically Employed		Ph.D. Cohort and Sex							
			1934-1968		1969-1971		1972-1974		1975-1976	
	M	F	M	F	M	F	M	F	M	F
Total, All Fields	39,680	10,610	21,160	3,760	6,930	1,800	7,530	2,850	4,060	2,200
Professor	40.3	19.5	68.1	47.5	14.6	7.4	5.7	4.4	3.5	1.2
Assoc. Prof.	30.2	27.8	24.4	31.9	53.6	52.3	34.1	22.1	13.8	8.2
Asst. Prof.	22.3	35.6	2.6	9.0	25.9	29.6	51.0	54.4	65.3	61.5
Instr/Lectr/Other	3.9	13.2	1.6	7.2	2.8	7.1	5.8	15.6	14.1	25.4
No Report	3.3	3.9	3.3	4.3	3.1	3.7	3.4	3.5	3.4	3.7
History	11,190	1,580	6,280	620	1,980	230	1,840	390	1,090	340
Professor	44.2	22.1	71.1	49.8	16.8	4.3	4.1	7.0	6.9	0.3
Assoc. Prof.	31.0	28.9	22.8	33.4	55.8	49.8	40.4	29.9	17.2	5.0
Asst. Prof.	17.5	28.8	1.6	7.9	21.3	26.8	45.5	38.7	54.8	57.4
Instr/Lectr/Other	4.7	14.5	1.5	5.3	3.3	19.0	9.3	16.6	17.5	26.0
No Report	2.6	5.7	3.0	3.5	2.7	0.0	0.8	7.8	3.6	11.2
English/Amer. Lit.	10,760	3,880	5,720	1,380	2,020	690	2,000	1,050	1,020	760
Professor	38.9	18.6	67.1	45.4	13.5	7.5	3.1	3.7	1.7	0.4
Assoc. Prof.	29.8	29.0	24.6	30.8	50.4	56.3	34.1	25.5	8.9	6.0
Asst. Prof.	23.8	35.0	4.0	11.6	30.2	29.3	50.2	50.5	70.8	61.6
Instr/Lectr/Other	3.1	14.1	1.4	6.7	1.4	5.2	4.4	18.8	13.5	29.2
No Report	4.4	3.2	2.9	5.5	4.6	1.6	8.1	1.5	5.1	2.8
Other Languages	6,820	2,900	3,630	950	1,080	500	1,370	780	740	670
Professor	35.6	16.3	62.6	44.2	9.3	5.6	2.7	2.2	2.0	1.2
Assoc. Prof.	32.0	26.9	29.9	34.8	60.9	52.1	28.0	17.6	7.9	7.9
Asst. Prof.	27.3	41.2	3.0	8.7	26.0	35.3	65.2	65.3	78.7	63.5
Instr/Lectr/Other	2.7	12.6	1.8	9.1	1.6	3.0	2.4	12.0	9.4	25.5
No Report	2.4	3.0	2.7	3.2	2.3	4.0	1.7	3.0	2.0	1.9
Other Humanities	10,910	2,250	5,530	810	1,850	380	2,320	630	1,210	430
Professor	40.7	23.6	69.4	53.2	16.4	11.4	11.1	6.5	2.8	3.3
Assoc. Prof.	28.9	26.1	22.4	29.3	50.4	46.6	32.7	17.3	18.4	14.9
Asst. Prof.	22.5	33.9	2.0	5.9	26.2	24.1	47.7	56.9	62.0	61.5
Instr/Lectr/Other	4.6	11.5	1.8	7.3	4.7	8.5	6.2	14.3	14.4	17.9
No Report	3.4	5.0	4.4	4.3	2.2	9.5	2.4	4.9	2.5	2.3

Ranks of the Academically Employed

Data on rank for the academically employed Ph.D.'s in the humanities by sex, year of Ph.D., and field of doctorate are presented in Table 23. Although there was some fluctuation among the various fields, the percentage of humanities doctorates attaining the rank of professor or associate professor for all year groups combined was higher for men than for women in each field. Over two-thirds of the male Ph.D.'s were in senior ranks, compared with approximately one-half of the women. Women were found more frequently in assistant professor and instructor positions. Of those who have earned Ph.D.'s since 1972, women were almost twice as likely to hold off-ladder appointments.

Tenure in Universities and Four-Year Colleges

Among the humanities Ph.D.'s employed at four-year colleges and universities at the ranks of professor, associate professor or assistant professor, approximately three-fourths of the men had achieved tenure compared with 56.5 percent of the women (Table 24). A slightly larger percentage of both male and female history Ph.D.'s were tenured compared with other fields in the humanities.

Table 24 shows that for all humanities fields combined, 95.0 percent of the humanities Ph.D.'s employed at the professorial rank were tenured compared with 87.4 percent of those at the associate professor level, and 24.9 percent of those at the assistant professor rank. The tenure situation by rank was basically the same when viewed within field of doctorate. Ph.D.'s in English and American literature, however, had a higher percentage of assistant professors who were tenured (28.9 percent) than other humanities fields.

Faculty Salaries in Universities and Four-Year Colleges

The mean annual salaries of humanities Ph.D.'s who were employed full-time in 1977 are presented in Table 25 by field of doctorate, academic rank, and sex. For all academic ranks combined, the 1977 salaries for women faculty were lower than those for men in all fields. This may be accounted for in part by the fact that fewer women

were employed at the professorial level and more at the lower ranks. However, when salaries were compared within each rank, they were found to be lower for female than for male full professors in all fields.[10] The widest range in mean salaries at the full professor level occurred in the English and American literature field--a $4,200 difference. At the associate professor level, women's salaries were only slightly lower than men's, except in history where they were higher. Differences between the mean salaries of men and women at the assistant professor level were not significant.

TABLE 24 Percentage Tenured, Humanities Ph.D. Faculty[a] Employed Full- or Part-Time at Universities or Four-Year Colleges by Sex, Rank, and Field of Doctorate, 1977

		Field of Doctorate			
Sex/Rank	Total All Fields	History	Engl/ Amer Lit	Other Langs	Other Human
TOTAL	43,890	10,950	12,690	8,680	11,570
% Tenured	73.2	79.1	72.7	67.4	72.5
Men	35,560	9,770	9,720	6,330	9,740
% Tenured	77.1	81.4	77.4	72.3	75.7
Women	8,330	1,180	2,970	2,350	1,830
% Tenured	56.5	59.9	57.4	54.2	55.6
Professor	17,440	5,030	4,800	2,800	4,810
% Tenured	95.0	97.1	93.8	94.6	94.3
Associate Prof.	14,350	3,660	4,160	2,880	3,650
% Tenured	87.4	88.5	87.8	88.2	85.4
Assistant Prof.	12,100	2,260	3,730	3,000	3,110
% Tenured	24.9	23.8	28.9	22.2	23.7

[a]Percentages are based only on faculty at the professor, associate professor, and assistant professor ranks.

[10]Similar differences were found in science faculties where the differentials for men and women full professors were at least $2,500 in every field. (Climbing the Academic Ladder, NRC-NAS, p. 89).

TABLE 25 Mean Annual Salaries of Full-Time Employed Humanities Ph.D. Faculty at 4-Year Colleges and Universities by Field, Rank, and Sex, 1977 (in thousands of dollars)

Field of Doctorate	Total[a]		Academic Rank					
			Professor		Associate Professor		Assistant Professor	
	M	F	M	F	M	F	M	F
Total, All Fields	$23.1	$19.6	$28.3	$24.9	$20.9	$19.9	$17.0	$16.6
History	23.7	21.2	28.5	26.2	20.8	21.7	16.9	17.1
English/Amer. Lit	23.0	19.2	28.3	24.1	20.9	19.4	16.8	16.7
Other Languages	22.5	19.0	28.5	25.2	20.8	19.7	16.9	16.1
Other Humanities	23.2	19.9	28.0	24.6	21.0	20.0	17.3	16.8

[a]Instructors included in total.

Primary Work Activity in Academe

Teaching was the primary work activity of over three-fourths of all humanities Ph.D.'s employed full or part-time in academe in 1977 (Table 26), and actual percentages ranged up to 88 percent. Management/administration was second with percentages ranging from about 6.5 to almost 16 throughout each of the humanities Ph.D. fields.

Writing/editing was a frequent work activity for Ph.D.'s in other humanities who were employed by two-year colleges (6.1 percent) and for history Ph.D.'s employed by universities (5.8 percent). Academically employed humanities Ph.D.'s were distributed evenly in all other work activities in 1977, with no percentages showing a particular trend.

Mean Salary by Field and Primary Work Activity

A look at this final characteristic of full-time academically employed humanities Ph.D.'s by field indicates that in 1977 the highest mean annual salary was estimated for Ph.D.'s in history ($23,100), and did not differ markedly from the lowest mean salary ($21,500 for Ph.D.'s in other languages).

When viewed from the standpoint of primary work activity, however, there were some notable differences in estimated mean annual salaries ranging from the mean annual salary of $27,700 for work in management and administration to the average across all fields of $20,800 for work in the group of other types of activity.

TABLE 26 Primary Work Activity Percentages by Field of Doctorate for Academically Employed Humanities Ph.D.'s, 1977

		Primary Work Activity					
Field of Doctorate	Total	Teach	Research/ Design	Mgmt/ Admin	Writ/ Edit	Other	No Report
Total, All Fields	N	%	%	%	%	%	%
Academic	50,290	77.0	4.4	10.1	3.7	1.9	2.8
Univ.	30,380	73.7	5.8	11.3	4.5	2.1	2.6
4-Yr. College	16,970	82.1	2.5	7.9	2.6	1.7	3.2
2-Yr. College	2,940	81.9	1.1	10.0	2.5	1.6	2.9
History							
Academic	12,770	76.3	5.6	9.6	4.4	1.6	2.5
Univ.	7,550	71.9	7.4	10.4	5.8	1.9	2.6
4-Yr. College	4,280	81.4	3.4	8.6	2.7	1.0	2.9
2-Yr. College	940	88.0	1.3	8.3	1.4	1.1	0.0
Engl/Amer Literature							
Academic	14,640	78.6	3.7	9.4	4.1	1.7	2.5
Univ.	8,540	75.3	5.3	10.0	5.0	1.9	2.4
4-Yr. College	5,200	82.8	1.5	8.5	3.0	1.7	2.4
2-Yr. College	900	85.0	1.2	8.5	1.3	0.1	3.8
Other Languages							
Academic	9,720	80.1	4.2	7.6	2.9	1.6	3.5
Univ.	6,080	77.2	5.6	8.2	3.6	2.0	3.5
4-Yr. College	3,240	85.9	2.1	6.5	1.9	0.7	2.9
2-Yr. College	400	77.4	0.0	7.9	1.5	3.3	9.9
Other Humanities							
Academic	13,160	73.7	4.2	13.0	3.3	2.8	3.0
Univ.	8,210	71.2	5.1	15.7	3.4	2.4	2.3
4-Yr. College	4,250	79.0	2.9	7.6	2.6	3.4	4.6
2-Yr. College	700	72.3	1.3	15.4	6.1	3.4	1.6

TABLE 27 Mean Annual Salaries by Primary Work Activity and Field of Doctorate for Full-Time Employed Humanities Ph.D.'s in Academe, 1977 (in thousands of dollars)

Primary Work Activity	Total All Fields	Field of Doctorate: History	Engl/Amer Lit	Other Langs	Other Humanities
Total, Academic[a]	$22.3	$23.1	$22.0	$21.5	$22.6
Teaching	21.6	22.6	21.3	20.8	21.6
Res/Dev/Design	22.5	23.0	21.9	22.3	22.7
Mgmt/Admin	27.7	27.4	27.4	27.3	28.5
Writ/Editing	23.1	24.5	22.6	22.3	22.3
Other	20.8	–[b]	21.0	20.6	20.9

[a]Includes cases for whom primary work activity was unknown.
[b]Mean could not be estimated because of the small number of sample cases.

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This chapter's look at all academically employed humanities Ph.D.'s reveals that in 1977: the majority of employed humanities Ph.D.'s were working in academe; men had attained tenure and full or associate professorships more frequently than women and their mean annual salaries were higher in all fields and cohorts; the primary work activity was teaching, but academically employed Ph.D.'s whose work activity was management and administration had the highest estimated mean salaries.

5
Humanities Ph.D.'s in Nonacademic Employment

A Recent Increase in Nonacademic Employment

As discussed in Chapter 4, the overwhelming percentage (87.3) of employed humanities doctorates were working in academe in 1977. The remaining 12 percent (allowing 0.7 to 0.9 percent for individuals whose status is unknown) of the employed humanities Ph.D.'s from all cohorts were working in nonacademic jobs. In this regard, the discrepancy between Ph.D. cohorts is perhaps the most notable characteristic, for in contrast to the 1934-68 cohort percentage of 8.4, the percentage of nonacademically employed Ph.D.'s from the 1975-76 cohort was 19.9.

In the light of this finding, Chapter 5 examines these nonacademically employed Ph.D.'s in terms of primary work activity, salary, sex, field, and year of the doctorate.

TABLE 28 Percentage of Humanities Ph.D.'s Employed Full- or Part-Time Who Are in Nonacademic Positions by Year of Ph.D. and Sex, 1977

		Year of Doctorate			
Sex	Total 1934-76	1934 -68	1969 -71	1972 -74	1975 -76
Total Employed	57,600	27,470	9,990	12,230	7,910
% in Nonacad.	12.0	8.4	12.1	15.0	19.9
Men Employed	45,200	23,080	7,880	8,920	5,320
% in Nonacad.	11.5	7.4	11.6	15.3	22.7
Women Employed	12,400	4,390	2,110	3,310	2,590
% in Nonacad.	13.9	13.6	14.3	14.2	14.0

In Table 28, the percentage of employed humanities Ph.D.'s working in nonacademic jobs is examined by sex and year of Ph.D. Overall, the percentage of women (13.9) working in nonacademic jobs was found to be slightly higher than that of men (11.5) but to have remained relatively steady over time. The percentage of men in nonacademic jobs, however, increased steadily over the same period. While only 7.4 percent of the employed 1934-68 cohort of male Ph.D.'s were working in nonacademic jobs in 1977, the proportion of 1975-76 male Ph.D.'s was 22.7 percent, accounting almost entirely for the cohort changes in recent years. Table 29 goes on to examine the nonacademically employed humanities Ph.D.'s according to field of doctorate and shows that the highest overall percentage in 1977 was 16.7 from the field of history, whereas the lowest occurred in the field of English and American literature (8.4 percent).

TABLE 29 Percentage of Employed Humanities Ph.D.'s Working in Nonacademic Positions by Field of Doctorate, 1977

		Field of Doctorate			
	Total All Fields	History	Engl/Amer Literature	Other Languages	Other Humanities
Total 1934-76					
Employed Ph.D.'s	57,600	15,450	16,120	11,130	14,900
Nonacademic (N)	6,910	2,580	1,360	1,320	1,650
(%)	12.0	16.7	8.4	11.9	11.1

Type of Employer by Field of Doctorate and Primary Work Activity

The largest single nonacademic employer of humanities Ph.D.'s across all fields was business and industry (27.6 percent). As shown in Table 30, however, there is a large degree of variance from field to field. While business and industry was in fact the largest nonacademic employer of Ph.D.'s in English and American literature (38.7 percent), government (federal, state, local, and others) employed the largest percentage (30.8) of history Ph.D.'s. Elementary and secondary schools provided the most jobs (32.4 percent) for those Ph.D.'s in other languages who were nonacademically employed, and almost half (46.4 percent) of the nonacademically employed Ph.D.'s in other humanities (e.g., speech, music, philosophy, library sciences) were working for other employers,

including private foundations, research libraries, archives, museums, historical societies, medical schools, hospitals, clinics, and other nonprofit organizations.

TABLE 30 Type of Employer of Nonacademically Employed Humanities Ph.D.'s by Field of Doctorate, 1977

		Field of Doctorate			
Type of Employer	Total All Fields	History	Engl/Amer. Lit.	Other Languages	Other Humanities
Total, Nonacademic	6,910	2,580	1,360	1,320	1,650
	%	%	%	%	%
Elem/Sec School	20.0	16.5	23.1	32.4	13.0
Business/Ind.	27.6	19.3	38.7	29.6	29.9
Government	20.2	30.8	18.0	13.4	10.7
Other Employers	32.2	33.4	20.2	24.6	46.4

Primary Work Activity by Employer Category

The primary work activities of nonacademically employed humanities Ph.D.'s are presented according to type of employer in Table 31. Overall, management and administration was the most frequent work activity for nonacademically employed humanities Ph.D.'s (23.6 percent). All work activities but teaching, however, tended to be represented to some extent among all the various employer categories. As would be predicted, teaching was the primary activity of 70 percent of those nonacademically employed humanities Ph.D.'s working at elementary and secondary schools whereas for other employers teaching was consistently under 5 percent.

TABLE 31 Primary Work Activity of Nonacademically Employed Humanities Ph.D.'s by Type of Employer, 1977

		Type of Employer			
Primary Work Activity	Total	Elem/ Sec Sch	Bus/ Ind	Gov't	Other Empl.
Total, Nonacademically Employed	6,910	1,380	1,910	1,400	2,220
	%	%	%	%	%
Management/Administration	23.6	13.0	10.8	33.4	35.1
Consulting/Prof Services	13.9	5.8	17.8	13.1	16.1
Writing/Editing	12.6	1.7	21.2	12.0	12.2
Teaching	17.5	70.2	4.6	3.4	4.5
Research/Design/Development	8.2	2.3	6.7	14.7	9.2
Other Work Activities[a]	18.0	4.0	33.4	18.0	13.7
No Report	6.2	3.0	5.5	5.4	9.2

[a]Includes marketing, production, and inspection.

Management and administration activities engaged over one-third of those nonacademically employed by government or other employers, but it was the primary activity for only 10.8 percent of those in business and industry, whose primary work was in other activities (33.4 percent) such as marketing/production/inspection and writing and editing (21.2 percent).

Salaries for Nonacademically Employed Humanities Ph.D.'s

The mean annual salary of humanities Ph.D.'s employed full-time in nonacademic positions was $19,900 (Table 32). Humanities Ph.D.'s in government had the highest estimated mean annual salary ($21,200) and those in elementary/secondary schools, the lowest ($18,900).

TABLE 32 Mean Annual Salaries of Humanities Ph.D.'s Employed Full-Time in Nonacademic Jobs by Primary Work Activity and Employer Category, 1977 (in thousands of dollars)

		Employer Category			
Primary Work Activity	Total Nonacad. Employed	Elem/ Sec Sch	Bus/ Ind	Gov't	Other Empl.
Total	$19.9	$18.9	$20.0	$21.2	$19.5
Teaching	17.1	17.5	–[a]	–	–
Research/Design/Development	20.4	–	–	–	17.2
Management/Administration	23.9	23.8	28.8	24.6	22.3
Consulting/Prof Services	20.8	–	23.2	18.7	19.8
Writing/Editing	17.5	–	16.7	–	17.6
Other Work Activities	16.3	–	16.7	14.6	16.4
No Report	21.2	–	–	–	–

[a]Means have not been computed because there were too few cases for statistical reliability.

When viewed according to primary work activity, nonacademically employed humanities Ph.D.'s working in management and administration were paid the most ($23,900), especially those in business and industry ($28,800). Humanities Ph.D.'s employed in consulting or professional services had a higher mean annual salary in industry ($23,200) than the same individuals working for government ($18,700) or other employers ($19,800).

When compared with the mean annual salaries of academically employed Ph.D.'s across all fields and in all primary work activities (as shown in Table 27, Chapter 4),

these salaries for nonacademically employed Ph.D.'s seem to be significantly lower, except for those working in management and administration. When examined by cohort as in Table 33, however, analysis shows no significant differences in salaries within or outside of academe, except in the case of the 1969-71 cohort of humanities Ph.D.'s.

TABLE 33 Mean Annual Salaries of Full-Time Employed Humanities Ph.D.'s by Employment Sector and Year of Ph.D. (in thousands of dollars)

	Employment Sector	
Year of Ph.D.	Academe	Nonacademic
Total 1934-1976 Ph.D.'s	$22.3	$19.9
1934-1968 Ph.D.'s	26.3	24.7
1969-1971 Ph.D.'s	20.0	18.2
1972-1974 Ph.D.'s	18.1	18.1
1975-1976 Ph.D.'s	16.3	16.1

* * * * * * * * * * * * * * *

Nonacademic employment among humanities Ph.D.'s is on the increase, to judge by the fact that three times more male Ph.D.'s from the 1975-76 cohort than from the 1934-68 cohort were in nonacademic positions in 1977. Business and industry was the most frequent single non-academic employer, and management and administration, the principal work activity of nonacademically employed humanities Ph.D.'s. Although overall the mean annual salaries were lower outside academe than within, those employed by business and industry and working in administration and management had the highest mean annual salary ($28,800) of all groups in the humanities doctoral labor force.

Appendix A
1977 Survey of Doctorate Recipients Questionnaire and Specialties List

OMB No. 099-RO294

1977 SURVEY OF DOCTORATE RECIPIENTS

CONDUCTED BY THE NATIONAL RESEARCH COUNCIL WITH THE SUPPORT OF THE NATIONAL SCIENCE FOUNDATION, THE NATIONAL ENDOWMENT FOR THE HUMANITIES, AND THE NATIONAL INSTITUTES OF HEALTH

THE ACCOMPANYING LETTER requests your assistance in this biennial survey of Ph.D.'s in the humanities, sciences, and engineering.
PLEASE READ the instructions for each question carefully and answer by printing your reply or checking the appropriate box.
PLEASE CHECK the pre-printed information to be certain that it is correct and complete.
PLEASE RETURN the completed form in the enclosed envelope to the Commission on Human Resources, JH 638, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.
NOTE: THIS INFORMATION IS SOLICITED UNDER THE AUTHORITY OF THE NATIONAL SCIENCE FOUNDATION ACT OF 1950, AS AMENDED. ALL INFORMATION YOU PROVIDE WILL BE TREATED AS CONFIDENTIAL AND USED FOR STATISTICAL PURPOSES ONLY. INFORMATION WILL BE RELEASED ONLY IN THE FORM OF STATISTICAL SUMMARIES OR IN A FORM WHICH DOES NOT IDENTIFY INFORMATION ABOUT ANY PARTICULAR PERSON. YOUR RESPONSE IS ENTIRELY VOLUNTARY AND YOUR FAILURE TO PROVIDE SOME OR ALL OF THE REQUESTED INFORMATION WILL IN NO WAY ADVERSELY AFFECT YOU.

If your name and address are incorrect, please enter correct information above. Include ZIP CODE. (10)

If there is an alternate address through which you can always be reached, please provide it on the line below.

C/O Number Street City State ZIP Code (11)

1. Date of Birth Mo. Day Year (12-16)

2. State or Foreign Country of Birth (17-18)

3. Citizenship 0 ☐ U.S.A. 1 ☐ Non-U.S.A., Specify Country _____ (19) (20-21)

4. Sex 1 ☐ M 2 ☐ F (22)

5. What is your racial background?
0 ☐ American Indian or Alaskan Native
1 ☐ Asian or Pacific Islander
2 ☐ Black
3 ☐ White
(23)

5a. Is your ethnic heritage Hispanic?
0 ☐ Yes
1 ☐ No
(24)

6. List in the table below all collegiate and graduate degrees, excluding honorary degrees, that have been awarded to you. Please check the pre-printed information, including the number and name of the specialty from the list on page 4, to be certain that it is correct and complete.

Type of Degree	Granted Mo. Yr.	Major Field (Use Specialties List) Name Number	Institution Name	City (or Campus) & State
Bachelor's				
Master's				
Doctorate				
Other (Specify) _____				

7. What was your employment status as of February 6-12, 1977? (Check only one category.)

Employed full-time in field of Ph.D. ☐ 1
Employed full-time in field other than field of Ph.D. ☐ 2
Employed part-time ☐ 3
Were you seeking full-time employment? 1 ☐ Yes 2 ☐ No (66)
Postdoctoral appointment (fellowship, traineeship, research associateship, etc.) ☐ 4
Unemployed and seeking employment ☐ 5
Not employed and not seeking employment ☐ 6
Retired and not employed ☐ 7
Other, specify: _____ ☐ 8

7a. If you were employed full-time during February 6-12, 1977, in a field other than your field of Ph.D., what was the MOST important reason for taking the position?

Preferred position outside Ph.D. field ☐ 1
Promoted out of position in Ph.D. field ☐ 2
Better pay ☐ 3
Locational factors ☐ 4
Position in Ph.D. field not available ☐ 5
Other, specify: _____ ☐ 6 (67)

If you checked 5, 6 or 7, ANSWER ONLY 8a, 9a, 13, 14 and 17 of the following questions.

8. Which category below best describes the type of organization of your principal employment OR postdoctoral appointment during February 6-12, 1977? (Check only one category.)

- ☐ 1 Business or industry
- ☐ 2 Junior college, 2-year college, technical institute
- ☐ 3 Medical school
- ☐ 4 4-Year college
- ☐ 5 University, other than medical school
- ☐ 6 Elementary or secondary school system
- ☐ 7 Private foundation
- ☐ 8 Museum or historical society
- ☐ 9 Research library or archives
- ☐ 10 Hospital or clinic
- ☐ 11 U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NOAA
- ☐ 12 U.S. government, civilian employee
- ☐ 13 State government
- Local or other government, specify: _____ ☐ 14
- ☐ 15 Non-profit organization, other than those listed above
- Other, specify: _____ ☐ 16

(68-69)

8a. Which of the above categories best describes the type of organization related to your first position following the receipt of your doctorate? (List only one category)

_____
Type of Organization (70-71)

9. What percent of time did you devote to each of the following activities during the week of February 6-12, 1977? (Total should equal 100%) **What were your primary (A) and secondary (B) work activities?** (Check only one in each column.)

	%	A	B
Management or administration of			
Research and development	(10)	☐ 1	☐
Other than research and development	(12)	☐ 2	☐
Both	(14)	☐ 3	☐
Basic research	(16)	☐ 4	☐
Applied research	(18)	☐ 5	☐
Development of equipment, products, systems, data	(20)	☐ 6	☐
Development of humanities resource materials	(22)	☐ 7	☐
Design	(24)	☐ 8	☐
Teaching	(26)	☐ 9	☐
Writing, editing	(28)	☐ 10	☐
Curatorial	(30)	☐ 11	☐
Production	(32)	☐ 12	☐
Consulting, specify: _____	(34)	☐ 13	☐
Professional services to individuals	(36)	☐ 14	☐
Quality control, inspection, testing	(38)	☐ 15	☐
Sales, marketing, purchasing, estimating	(40)	☐ 16	☐
Other, specify: _____	(42)	☐ 17	☐
Total = 100%		(44-47)	

9a. Which of the above categories best describes the primary work activity related to your first position following the receipt of your doctorate?

_____
Primary Work Activity Number (48-49)

10. From the Degree and Employment Specialties List on page 4 select and enter both the number and title of the employment specialty most closely related to your principal employment or postdoctoral appointment during the week of February 6-12, 1977. Write in your specialty if it is not on the list.

_____
Number Title of Employment Specialty (50-52)

11. Please give the name of your principal employer (organization, company, etc. or, if self employed, write "self"), and actual place of employment as of the week of February 6-12, 1977.

_____
Name of Employer (53-58)

_____
Number Street

_____
City State ZIP Code (59-63)

12. What was the basic annual salary* associated with your principal professional employment during the week of February 6-12, 1977? If you were on a postdoctoral appointment (e.g., fellowship, traineeship, research associateship), what was your annual stipend plus allowances?

$ _____ per year (64-66)

*NOTE: Basic annual salary is your annual salary before deductions for income tax, social security, retirement, etc., but does not include bonuses, overtime, summer teaching, or other payment for professional work.

IF ACADEMICALLY EMPLOYED:

a. Check whether salary was for ☐ 9-10 months or ☐ 11-12 months. (67)

b. Did you hold a tenured position during February 6-12, 1977? 0 ☐ Yes 1 ☐ No (68)
If Yes, what year was tenure granted? _____ (69-70)

c. What was the rank of your position? (Check only one.)
- 1 ☐ Professor
- 2 ☐ Associate Professor
- 3 ☐ Assistant professor
- 4 ☐ Instructor
- 5 ☐ Lecturer
- 6 ☐ Other, specify: _____ (71)

d. What, if any, administrative position did you hold?
- 1 ☐ Dean
- 2 ☐ Department Chairman
- 3 ☐ President or Chancellor
- 4 ☐ Vice-President or Vice-Chancellor
- 5 ☐ Other, specify _____
- 6 ☐ Does not apply (72)

13. **How many full-time equivalent years of professional work experience, including teaching, have you had?** _____ **Year(s)**
(73-74)

14. **Following completion of your doctorate have you ever held a fellowship, traineeship, or research associateship?** 0 ☐ Yes 1 ☐ No
(75)

15. **Listed below are selected topics of national interest. If you devoted a proportion of your professional time which you considered significant to any of these problem areas during the week of February 6-12, 1977, please check the box for the one on which you spent the MOST time.**

1 ☐ Health
2 ☐ Defense
3 ☐ Environmental protection, pollution control
4 ☐ Education
5 ☐ Space
6 ☐ Crime prevention and control
7 ☐ Energy and fuel
8 ☐ Food and other agricultural products
9 ☐ Natural resources,other than fuel or food
10 ☐ Community development and services
11 ☐ Housing (planning, design, construction)
12 ☐ Transportation, communications
13 ☐ Cultural life
14 ☐ Other area, specify: _____
15 ☐ Does not apply
(10-11)

16. **Was any of your work in the week of February 6-12, 1977 supported or sponsored by U.S. Government funds?**

0 ☐ Yes 1 ☐ No 2 ☐ Don't know (12)

If Yes, which of the following federal agencies or departments were supporting the work? (Check all that apply.)

13 ☐ Agency for International Development
14 ☐ Energy Research & Development Administration
15 ☐ Environmental Protection Agency
16 ☐ National Aeronautics & Space Administration
17 ☐ National Endowment for the Arts
18 ☐ National Endowment for the Humanities
19 ☐ National Science Foundation
20 ☐ Nuclear Regulatory Commission
21 ☐ Smithsonian Institution
22 ☐ Department of Agriculture
23 ☐ Department of Commerce
24 ☐ Department of Defense

Department of Health, Education, and Welfare
25 ☐ National Institutes of Health
26 ☐ Alcohol, Drug Abuse & Mental Health Administration
27 ☐ National Institute of Education
28 ☐ Office of Education
29 ☐ Other, specify: _____
30 ☐ Department of Housing and Urban Development
31 ☐ Department of the Interior
32 ☐ Department of Justice
33 ☐ Department of Labor
34 ☐ Department of State
35 ☐ Department of Transportation
36 ☐ Other agency or department, specify: _____
37 ☐ Don't know source agency

17. **If you received your doctoral degree in science or engineering or are employed as a scientist or engineer, please check all that apply below:**

☐ (a) Changed positions during the period 1973 to 1976.
☐ (b) Received doctoral degree in 1965 or later and employed sometime since receiving your doctoral degree in industry, government, or as non-faculty academic staff.
☐ (c) Held a postdoctoral appointment any year during 1970-1976 inclusive.
☐ (d) None of the above apply.
(38-41)

If you have checked a, b, or c, please give a brief career history starting with the position prior to your present position and continuing back in time for a maximum of four positions after receiving your doctoral degree (Include postdoctoral appointments).

Name and Location (City and State) of Employer	Position Title	Dates Held	Primary Work Activity*	Employment Specialty (Use Degree & Employment Specialties List)	Reason for Leaving Position
1.					
2.					
3.					
4.					

*Enter code (1-17) from the list given in item 9.

(a) Of the positions described above, as well as your present position, please check any in which your doctoral training was/is not being used.
☐ Position 1 ☐ Position 2 ☐ Position 3 ☐ Position 4 ☐ Present Position ☐ None
(74-79)

DEGREE AND EMPLOYMENT SPECIALTIES LIST

MATHEMATICAL SCIENCES

000 Algebra
010 Analysis & Functional Analysis
020 Geometry
030 Logic
040 Number Theory
052 Probability
055 Math. Statistics (see also 544, 670, 725, 729)
060 Topology
082 Operations Research (see also 478)
085 Applied Mathematics
089 Combinatorics & Finite Mathematics
091 Physical Mathematics
098 Mathematics, General
099 Mathematics, Other*

COMPUTER SCIENCES

071 Theory
072 Software Systems
073 Hardware Systems
074 Intelligent Systems
079 Computer Sciences, Other

PHYSICS & ASTRONOMY

101 Astronomy
102 Astrophysics
110 Atomic & Molecular Physics
120 Electromagnetism
130 Mechanics
132 Acoustics
134 Fluids
135 Plasma Physics
136 Optics
138 Thermal Physics
140 Elementary Particles
150 Nuclear Structure
160 Solid State
198 Physics, General
199 Physics, Other*

CHEMISTRY

200 Analytical
210 Inorganic
215 Synthetic Inorganic & Organometallic
220 Organic
225 Synthetic Organic & Natural Products
230 Nuclear
240 Physical
245 Quantum
250 Theoretical
255 Structural
260 Agricultural & Food
265 Thermodynamics & Material Properties
270 Pharmaceutical
275 Polymers
280 Biochemistry (see also 540)
285 Chemical Dynamics
298 Chemistry, General
299 Chemistry, Other*

EARTH, ENVIRONMENTAL AND MARINE SCIENCES

301 Mineralogy, Petrology
305 Geochemistry
310 Stratigraphy, Sedimentation
320 Paleontology
330 Structural Geology
341 Geophysics (Solid Earth)
350 Geomorph. & Glacial Geology
391 Applied Geol., Geol. Engr. & Econ. Geol.
395 Fuel Tech. & Petrol. Engr. (see also 479)
360 Hydrology & Water Resources
370 Oceanography
397 Marine Sciences, Other*
381 Atmospheric Physics & Chemistry
382 Atmospheric Dynamics
383 Atmospheric Sciences, Other*
388 Environmental Sciences, General (see also 480, 528)
389 Environmental Sciences, Other*
398 Earth Sciences, General
399 Earth Sciences, Other*

ENGINEERING

400 Aeronautical & Astronautical
410 Agricultural
415 Biomedical
420 Civil
430 Chemical
435 Ceramic
440 Electrical
445 Electronics
450 Industrial & Manufacturing
455 Nuclear
460 Engineering Mechanics
465 Engineering Physics
470 Mechanical
475 Metallurgy & Phys. Met. Engr.
476 Systems Design & Systems Science (see also 072, 073, 074)
478 Operations Research (see also 082)
479 Fuel Technology & Petrol. Engr
480 Sanitary & Environmental
486 Mining
497 Materials Science Engr.
498 Engineering, General
499 Engineering, Other*

AGRICULTURAL SCIENCES

500 Agronomy
501 Agricultural Economics
502 Animal Husbandry
504 Fish & Wildlife
505 Forestry
506 Horticulture
507 Soils & Soil Science
510 Animal Science & Animal Nutrition
511 Phytopathology
517 Food Science & Technology (see also 573)
518 Agriculture, General
519 Agriculture, Other*

MEDICAL SCIENCES

520 Medicine & Surgery
522 Public Health & Epidemiology
523 Veterinary Medicine
524 Hospital Administration
526 Nursing
527 Parasitology
528 Environmental Health
534 Pathology
536 Pharmacology
537 Pharmacy
538 Medical Sciences, General
539 Medical Sciences, Other*

BIOLOGICAL SCIENCES

540 Biochemistry (see also 280)
542 Biophysics
543 Biomathematics
544 Biometrics, Biostatistics (see also 055, 670, 725, 729)
545 Anatomy
546 Cytology
547 Embryology
548 Immunology
550 Botany
560 Ecology
562 Hydrobiology
564 Microbiology & Bacteriology
566 Physiology, Animal
567 Physiology, Plant
569 Zoology
570 Genetics
571 Entomology
572 Molecular Biology
573 Food Science & Technology (see also 517)
574 Behavior/Ethology
576 Nutrition & Dietetics
578 Biological Sciences, General
579 Biological Sciences, Other*

PSYCHOLOGY

600 Clinical
610 Counseling & Guidance
620 Developmental & Gerontological
630 Education
635 School Psychology
641 Experimental
642 Comparative
643 Physiological
650 Industrial & Personnel
660 Personality
670 Psychometrics (see also 055, 544, 725, 729)
680 Social
698 Psychology, General
699 Psychology, Other*

SOCIAL SCIENCES

700 Anthropology
703 Archeology
708 Communications*
709 Linguistics
710 Sociology
720 Economics (see also 501)
725 Econometrics (see also 055, 544, 670, 729)
729 Social Statistics (see also 055, 544, 670, 725)
740 Geography
745 Area Studies*
751 Political Science
752 Public Administration
755 International Relations
770 Urban & Regional Planning
775 History & Philosophy of Science
798 Social Sciences, General
799 Social Sciences, Other*

HUMANITIES

802 History & Criticism of Art
804 History, American
805 History, European
806 History, Other*
808 American Studies
830 Music
831 Speech as a Dramatic Art (see also 885)
833 Religion (see also 881)
834 Philosophy
836 Comparative Literature
878 Humanities, General
879 Humanities, Other*
891 Library & Archival Sciences

LANGUAGES & LITERATURE

811 American
812 English
821 German
822 Russian
823 French
824 Spanish & Portuguese
826 Italian
827 Classical*
829 Other Languages*

EDUCATION & OTHER PROFESSIONAL FIELDS

938 Education
801 Art, Applied
881 Theology (see also 833)
882 Business Administration
883 Home Economics
884 Journalism
885 Speech & Hearing Sciences (see also 831)
886 Law, Jurisprudence
887 Social Work
897 Professional Field, Other*

899 OTHER FIELDS*

*Identify the specific field in the space on the questionnaire.

Appendix B
Survey of Earned Doctorates Questionnaire and Specialties List

SURVEY OF EARNED DOCTORATES
AWARDED IN
THE UNITED STATES

Conducted by
The National Research Council
in Cooperation with
The American Council of Learned Societies,
The Social Science Research Council, and
The Graduate Deans

Supported by
The National Science Foundation,
The U.S. Office of Education,
The National Endowment for the Humanities, and
The National Institutes of Health

To the Doctoral Candidate:

This is a brief description of the Survey of Earned Doctorates indicating how the resulting data are used and the individual confidentiality of data is protected. The basic purpose of this Survey is to gather objective data about doctoral graduates, data that are often helpful in improving graduate education. We ask your cooperation with the project.

The information requested on the accompanying questionnaire is largely self-explanatory. Please complete it, detach it along the perforated line, and return it to your Graduate Dean. On the back of this sheet is a Specialties List with code numbers and titles for classifying your fields of specialization. This will be useful in connection with several items on the questionnaire. If none of the detailed fields listed seems to be appropriate, note the "General" and "Other" categories.

What is the Survey of Earned Doctorates?

The Survey is conducted annually by the Commission on Human Resources of the National Research Council in cooperation with the American Council of Learned Societies and the Social Science Research Council. The form is distributed with the cooperation of the Graduate Deans and filled out by all graduates who have completed requirements for their doctoral degrees. Research doctorates in all fields are included, but professional degrees such as the MD, DDS, and DVM are not included because information about recipients of those degrees is compiled elsewhere. The cumulative file goes back to 1920 and is called the Doctorate Records File.

The use of the doctoral data has been increasing, partly because of the implications for graduate education stemming from the change in the growth pattern of the number of persons receiving doctorates (562 in 1920; 3,278 in 1940; 9,735 in 1960; 29,497 in 1970; peaking at 33,727 in 1973; and now at 32,923 in 1976). This survey attempts to supply some of the information as of the time the doctorate is received.

What uses are made of the Survey data?

The data collected by this survey questionnaire become part of the Doctorate Records File maintained by the Commission on Human Resources of the National Research Council. The Survey data are collected with the intention that they will be put to use, but only under carefully defined conditions. Such data as the number of degrees awarded in each field of specialization, the educational preparation of degree recipients, their sources of financial support, the length of time required to attain the degree, and postdoctoral employment plans of doctorate recipients are of great interest to graduate schools, employers, the scholarly community, and the nation generally. The Doctorate Records File is used for a limited number of carefully defined, follow-up research studies. Each year a sample of doctorate recipients is selected for inclusion in a longitudinal research file maintained for the National Science Foundation, the National Institutes of Health, and the National Endowment for the Humanities.

Statistical summaries from the Doctorate Records File are used by educational institutions, professional societies, and government agencies. Some specific examples are:

- An extensive statistical summary of the data is published and distributed to all graduate schools about every five years.[1] These reports have been widely used by graduate schools and states to evaluate their progress in providing doctoral education. The data may also be useful to graduate students as an aid in selecting a graduate department.
- Annual reports containing statistical summaries based on the most recent year's Survey are distributed to graduate schools, government agencies, and any others on request.[2]

The confidentiality of Survey data is carefully protected.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be treated as confidential and will be used for statistical purposes only. Information will be released only in the form of statistical summaries or in a form which does not identify information about any particular person. There are only two exceptions to this policy: (1) information (name, year, and field of degree) is released to institutions from which you received degrees and to other organizations as part of the address search procedure for follow-up research studies: and (2) information from your form will be made available to the institution where you receive your doctoral degree. This latter release of information is contingent upon receipt of a signed statement from the institution that the information will be used only for internal purposes. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect you.

(1) National Academy of Sciences, *Doctorate Recipients from United States Universities, 1958-1966*, Washington, D. C. 1967.
(2) National Academy of Sciences, *Summary Report 1976, Doctorate Recipients from United States Universities*, Washington, D. C. March, 1977.

NSF Form 558 1977
OMB No. 99-R0290
Approval Expires June 30, 1979

SURVEY OF EARNED DOCTORATES

This form is to be returned to the GRADUATE DEAN, for forwarding to ..... Board on Human-Resource Data and Analyses
Commission on Human Resources
National Research Council
2101 Constitution Avenue, Washington, D. C. 20418

Please print or type.

A. Name in full: ..... (9-30)
(Last Name) (First Name) (Middle Name)

Cross Reference: Maiden name or former name legally changed ..... (31)

B. Permanent address through which you could always be reached: (Care of, if applicable) .....

..... (Number) (Street) (City)

..... (State) (Zip Code) (Or Country if not U.S.)

C. U.S. Social Security Number: ___ ___ ___ - ___ ___ - ___ ___ ___ ___ (32-40)

D. Date of birth: ..... (41-45) (Month) (Day) (Year) Place of birth: ..... (46-47) (State) (Or Country if not U.S.)

E. Sex: 1 ☐ Male 2 ☐ Female (48)

F. Marital status: 1 ☐ Married 2 ☐ Not married (including widowed, divorced) (49)

G. Citizenship: 0 ☐ U.S. native 2 ☐ Non-U.S., Immigrant (Permanent Resident)
1 ☐ U.S. naturalized 3 ☐ Non-U.S., Non-Immigrant (Temporary Resident) (50)
If Non-U.S., indicate country of present citizenship ..... (51-52)

H. Racial or ethnic group: (Check all that apply.) *A person having origins in —*
0 ☐ American Indian or Alaskan Native ..... any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.
1 ☐ Asian or Pacific Islander ..... any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.
2 ☐ Black, not of Hispanic Origin ..... any of the black racial groups of Africa.
3 ☐ White, not of Hispanic Origin ..... any of the original peoples of Europe, North Africa, or the Middle East.
4 ☐ Hispanic ..... Mexican, Puerto Rican, Central or South American, or other Spanish culture or origins, regardless of race. (53-55)

I. Number of dependents: Do not include yourself. (Dependent = someone receiving at least one half of his or her support from you) ..... (56)

J. U.S. veteran status: 0 ☐ Veteran 1 ☐ On active duty 2 ☐ Non-veteran or not applicable (57)

EDUCATION

K. High school last attended: ..... (58-59)
(School Name) (City) (State)

Year of graduation from high school: ..... (60-61)

L. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges. List chronologically, and include your doctoral institution as the last entry.

Institution Name	Location	Years Attended		Major Field		Minor Field	Degree (if any)		
		From	To	Use Specialties List Name	Number	Number	Title of Degree	Granted Mo.	Yr.

M. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box. ☐ (44)

Title ..... Classify using Specialties List

..... Number Name of field

.....

N. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: .....
(Department/Institute/Committee/Program) (School)

O. Name of your dissertation adviser: .....
(Last Name) (First Name) (Middle Initial)

SURVEY OF EARNED DOCTORATES, Cont.

P. Please enter a "1" beside your primary source of support during graduate study. Enter a "2" beside your secondary source of support during graduate study. Check all other sources from which support was received.

58 ___ NSF Fellowship
59 ___ NSF Traineeship
60 ___ NIH Fellowship
61 ___ NIH Traineeship
62 ___ NDEA Fellowship
63 ___ Other HEW
64 ___ AEC/ERDA Fellowship
65 ___ NASA Traineeship
66 ___ GI Bill
67 ___ Other Federal support (specify) .....
68 ___ Woodrow Wilson Fellowship
69 ___ Other U.S. national fellowship (specify) .....
70 ___ University Fellowship
71 ___ Teaching Assistantship
72 ___ Research Assistantship
73 ___ Educational fund of industrial or business firm
74 ___ Other institutional funds (specify) .....
75 ___ Own earnings
76 ___ Spouse's earnings
77 ___ Family contributions
78 ___ Loans (NDSL direct)
79 ___ Other loans
80 ___ Other (specify) .....

Q. Please check the space which most fully describes your status during the year immediately preceding the doctorate.

0 ☐ Held fellowship
1 ☐ Held assistantship
2 ☐ Held own research grant
3 ☐ Not employed
4 ☐ Part-time employed

Full-time Employed in: (Other than 0, 1, 2)
5 ☐ College or university, teaching
6 ☐ College or university, nor. teaching
7 ☐ Elem. or sec. school, teaching
8 ☐ Elem. or sec. school, non-teaching
9 ☐ Industry or business
(11) ☐ Other (specify) .....

(12) ☐ Any other (specify) ..... (9)

R. How many years (full-time equivalent basis) of professional work experience did you have prior to the doctorate? (include assistantships as professional experience) ..... (10-11)

POSTGRADUATION PLANS

S. How well defined are your postgraduation plans?
0 ☐ Have signed contract or made definite commitment
1 ☐ Am negotiating with a specific organization, or more than one
2 ☐ Am seeking appointment but have no specific prospects
3 ☐ Other (specify) ..... (12)

T. What are your immediate postgraduation plans?
0 ☐ Postdoctoral fellowship?
1 ☐ Postdoctoral research associateship? } Go to Item "U"
2 ☐ Traineeship?
3 ☐ Other study (specify) .....
4 ☐ Employment (other than 0, 1, 2, 3)
5 ☐ Military service? } Go to Item "V"
6 ☐ Other (specify) ..... (13)

U. If you plan to be on a postdoctoral fellowship, associateship, traineeship or other study

What will be the field of your postdoctoral study?
Classify using Specialties List.
Number Field
..... (14-16)

What will be the primary source of support?
0 ☐ U.S. Government
1 ☐ College or university
2 ☐ Private foundation
3 ☐ Nonprofit, other than private foundation
4 ☐ Other (specify) ..... (17)
6 ☐ Unknown

Go to Item "W"

V. If you plan to be employed, enter military service, or other — What will be the type of employer?
0 ☐ 4-year college or university other than medical school
1 ☐ Medical school
2 ☐ Jr. or community college
3 ☐ Elem. or sec. school
4 ☐ Foreign government
5 ☐ U.S. Federal government
6 ☐ U.S. state government
7 ☐ U.S. local government
8 ☐ Nonprofit organization
9 ☐ Industry or business
(11) ☐ Self-employed
(12) ☐ Other (specify) ..... (18)

Indicate *primary* work activity with "1" in appropriate box; *secondary* work activity (if any) with "2" in appropriate box.
0 ☐ Research and development
1 ☐ Teaching
2 ☐ Administration
3 ☐ Professional services to individuals
5 ☐ Other (specify) ..... (19-20)

In what field will you be working?
Please enter number from Specialties List ..... (21-23)

Go to Item "W"

W. What is the name and address of the organization with which you will be associated?

..... (Name of Organization)

..... (Street) ..... (City, State) (Or Country if not U.S.) (24-29)

BACKGROUND INFORMATION

X. Please indicate, by circling the highest grade attained, the education of

		Elementary school								High school				College				MA, MD PhD Graduate		Postdoctoral	
your father:	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA, MD	PhD	Postdoctoral	(30)
your mother	none 0	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA, MD	PhD	Postdoctoral	(31)
		1			2			3		4			5	6			7	8	9	(11)	

Signature ..... Date completed ..... (32-34)

SPECIALTIES LIST

MATHEMATICS

000 Algebra
010 Analysis & Functional Analysis
020 Geometry
030 Logic
040 Number Theory
050 Probability & Math. Statistics (see also 544, 670, 725, 727, 920)
060 Topology
080 Computing Theory & Practice
082 Operations Research (see also 478)
085 Applied Mathematics
098 Mathematics, General
099 Mathematics, Other*

COMPUTER SCIENCES

079 Computer Sciences* (see also 437)

ASTRONOMY

101 Astronomy
102 Astrophysics

PHYSICS

110 Atomic & Molecular
120 Electromagnetism
132 Acoustics
134 Fluids
135 Plasma
136 Optics
138 Thermal
140 Elementary Particles
150 Nuclear Structure
160 Solid State
198 Physics, General
199 Physics, Other*

CHEMISTRY

200 Analytical
210 Inorganic
220 Organic
230 Nuclear
240 Physical
250 Theoretical
260 Agricultural & Food
270 Pharmaceutical
275 Polymer
298 Chemistry, General
299 Chemistry, Other*

EARTH, ENVIRONMENTAL AND MARINE SCIENCES

301 Mineralogy, Petrology
305 Geochemistry
310 Stratigraphy, Sedimentation
320 Paleontology
330 Structural Geology
341 Geophysics (Solid Earth)
350 Geomorph. & Glacial Geology
391 Applied Geol., Geol. Engr. & Econ. Geol.
395 Fuel Tech. & Petrol. Engr. (see also 479)
360 Hydrology & Water Resources
370 Oceanography
397 Marine Sciences, Other*
381 Atmospheric Physics and Chemistry
382 Atmospheric Dynamics
383 Atmospheric Sciences, Other*
388 Environmental Sciences, General (see also 480, 528)
389 Environmental Sciences, Other*
398 Earth Sciences, General
399 Earth Sciences, Other*

ENGINEERING

400 Aeronautical & Astronautical
410 Agricultural
415 Biomedical
420 Civil
430 Chemical
435 Ceramic
437 Computer
440 Electrical
445 Electronics
450 Industrial
455 Nuclear
460 Engineering Mechanics
465 Engineering Physics
470 Mechanical
475 Metallurgy & Phys. Met. Engr.
476 Systems Design & Systems Science
478 Operations Research (see also 082)
479 Fuel Tech. & Petrol. Engr. (see also 395)
480 Sanitary & Environmental
486 Mining
497 Materials Science
498 Engineering, General
499 Engineering, Other*

AGRICULTURAL SCIENCES

500 Agronomy
501 Agricultural Economics
502 Animal Husbandry
503 Food Science & Technology
504 Fish & Wildlife
505 Forestry
506 Horticulture
507 Soils & Soil Science
510 Animal Science & Animal Nutrition
511 Phytopathology
518 Agriculture, General
519 Agriculture, Other*

MEDICAL SCIENCES

522 Public Health & Epidemiology
523 Veterinary Medicine
526 Nursing
527 Parasitology
528 Environmental Health
534 Pathology
536 Pharmacology
537 Pharmacy
538 Medical Sciences, General
539 Medical Sciences, Other*

BIOLOGICAL SCIENCES

540 Biochemistry
542 Biophysics
544 Biometrics & Biostatistics (see also 050, 670, 725, 727, 920)
545 Anatomy
546 Cytology
547 Embryology
548 Immunology
550 Botany
560 Ecology
562 Hydrobiology
564 Microbiology & Bacteriology
566 Physiology, Animal
567 Physiology, Plant
569 Zoology
570 Genetics
571 Entomology
572 Molecular Biology
576 Nutrition and/or Dietetics
578 Biological Sciences, General
579 Biological Sciences, Other*

PSYCHOLOGY

600 Clinical
610 Counseling & Guidance
620 Developmental & Gerontological
630 Educational
635 School Psychology
641 Experimental
642 Comparative
643 Physiological
650 Industrial & Personnel
660 Personality
670 Psychometrics (see also 050, 544, 725, 727, 920)
680 Social
698 Psychology, General
699 Psychology, Other*

SOCIAL SCIENCES

700 Anthropology
708 Communications*
710 Sociology
720 Economics (see also 501)
725 Econometrics (see also 050, 544, 670, 727, 920)
727 Statistics (see also 050, 544, 670, 725, 920)
740 Geography
745 Area Studies*
751 Political Science
752 Public Administration
755 International Relations
770 Urban & Reg. Planning
798 Social Sciences, General
799 Social Sciences, Other*

HUMANITIES

802 History & Criticism of Art
804 History, American
805 History, European
806 History, Other*
807 History & Philosophy of Science
808 American Studies
809 Theatre and Theatre Criticism
830 Music
831 Speech as a Dramatic Art (see also 885)
832 Archeology
833 Religion (see also 881)
834 Philosophy
835 Linguistics
836 Comparative Literature
878 Humanities, General
879 Humanities, Other*

LANGUAGES & LITERATURE

811 American
812 English
821 German
822 Russian
823 French
824 Spanish & Portuguese
826 Italian
827 Classical*
829 Other Languages*

EDUCATION

900 Foundations: Social & Philosoph.
910 Educational Psychology
908 Elementary Educ., General
909 Secondary Educ., General
918 Higher Education
919 Adult Educ. & Extension Educ.
920 Educ. Meas. & Stat.
929 Curriculum & Instruction
930 Educ. Admin. & Superv.
940 Guid., Couns., & Student Pers.
950 Special Education (Gifted, Handicapped; etc.)
960 Audio-Visual Media

TEACHING FIELDS

970 Agriculture Educ.
972 Art Educ.
974 Business Educ.
976 English Educ.
978 Foreign Languages Educ.
980 Home Economics Educ.
982 Industrial Arts Educ.
984 Mathematics Educ.
986 Music Educ.
988 Phys. Ed., Health, & Recreation
989 Reading Education
990 Science Educ.
992 Social Science Educ.
993 Speech Education
994 Vocational Educ.
996 Other Teaching Fields*

998 Education, General
999 Education, Other*

OTHER PROFESSIONAL FIELDS

881 Theology (see also 833)
882 Business Administration
883 Home Economics
884 Journalism
885 Speech & Hearing Sciences (see also 831)
886 Law & Jurisprudence
887 Social Work
891 Library & Archival Science
897 Professional Field; Other*

899 OTHER FIELDS*

* Identify the specific field in the space provided on the questionnaire.

Appendix C
Distribution of Humanities Ph.D.'s by Subfield of Doctorate and Year of Doctorate, 1920-78

Appendix C Distribution of Humanities Ph.D.'s by Subfield of Doctorate and Year of Doctorate, 1920–78

	Ph.D.'s by Decade, 1920–1978					
Ph.D. Fine Fields	1920's	1930's	1940's	1950's	1960's	1970's[a]
Total, All Humanities	2,334	5,194	5,144	11,557	23,079	38,456
Art History	18	44	75	305	514	1,084
Art, Fine & Applied[b]	18	44	75	305	423	–
Art Hist & Criticism[b]	–	–	–	–	91	1,084
History	661	1,436	1,428	3,230	5,908	9,535
History, General[c]	661	1,436	1,428	3,230	4,702	–
History, American[c]	–	–	–	–	504	3,579
History, European[c]	–	–	–	–	367	2,764
History, Other[c]	–	–	–	–	335	2,866
American Studies[d]	–	–	–	–	–	326
Music	1	35	137	570	1,250	2,744
Speech[e]	13	120	324	1,109	2,181	1,345
Philosophy	363	522	423	945	1,926	3,415
Philosophy	363	522	423	945	1,926	3,161
History & Phil of Sci[f]	–	–	–	–	–	254
Other Humanities	182	175	79	143	460	1,675
Library Sci	–	24	44	64	176	505
Humanities, General	182	125	–	9	55	184
Humanities, Other	–	26	35	70	229	986
English/Amer. Literature	516	1,357	1,435	3,171	6,658	10,686
English and American[g]	516	1,357	1,435	3,171	5,303	–
English[g]	–	–	–	–	1,141	8,677
American[g]	–	–	–	–	214	2,009
Classical Languages[h]	241	440	268	307	714	738
Modern Languages	339	1,065	975	1,777	3,468	7,234
German[i]	–	–	–	–	718	1,372
Russian[i]	–	–	–	–	159	455
French[i]	–	–	–	–	913	2,045
Spanish & Portuguese[i]	–	–	–	–	802	1,862
Italian[i]	–	–	–	–	58	189
Other Languages[i]	339	1,065	975	1,777	818	888
Comparative Lit[j]	–	–	–	–	–	423

[a]The 1970's includes only Ph.D.'s who earned their doctorates from January 1970 through June 1978.

[b]In FY1969, "Art, Fine and Applied" was broken out into "Art, Applied" and "Art, History and Criticism." The humanities sample does not include Ph.D.'s who classified their major field of study as "Art, Applied".

[c]Prior to FY1969, there was only one "History" classification. In 1969, this was broken out into "American History," "European History," and "History, Other."

[d]Added in FY1975.

[e]Originally specified as "Speech." In FY1962, "Dramatic Arts" was added. In FY1969, name changed to "Speech as a Dramatic Art." "Speech and Hearing Sciences" was added in FY1969 and "Communications" was added in FY1972; Ph.D.'s in these two fields, however, are not considered humanities doctorates.

Ph.D.'s by Fiscal Year, 1970–1978

1970	1971	1972	1973	1974	1975	1976	1977	1978
3,953	4,219	4,581	5,037	4,862	4,689	4,590	4,163	3,792
82	107	81	115	125	141	145	152	151
–	–	–	–	–	–	–	–	–
82	107	81	115	125	141	145	152	151
1,091	1,029	1,147	1,185	1,153	1,221	1,144	1,025	910
–	–	–	–	–	–	–	–	–
460	412	493	450	456	429	383	342	322
332	331	352	402	337	357	287	261	215
299	286	302	333	360	370	388	329	291
–	–	–	–	–	65	86	93	82
164	195	220	346	376	381	353	404	370
267	258	248	266	138	102	98	61	69
358	404	387	435	450	401	418	360	314
358	369	348	405	417	374	382	331	289
–	35	39	30	33	37	36	29	25
160	154	215	275	276	234	147	142	133
41	40	59	79	56	59	58	73	57
24	13	17	20	23	24	27	21	25
95	101	139	176	197	151	62	48	51
1,098	1,244	1,365	1,413	1,369	1,290	1,214	1,079	1,027
–	–	–	–	–	–	–	–	–
917	1,032	1,127	1,149	1,111	1,039	978	858	815
181	212	238	264	258	251	236	221	212
86	100	106	85	88	93	79	60	67
647	728	812	917	887	826	992	880	751
139	160	173	195	169	164	178	140	103
41	44	50	57	64	53	58	56	52
201	223	245	268	276	247	242	211	183
171	203	220	249	235	237	234	199	173
16	13	25	27	26	17	24	22	23
79	85	99	121	117	108	99	100	103
–	–	–	–	–	–	157	152	114

[f]Added in FY1971.
[g]In FY1969, the specification "American and English Literature" was broken out into "American Language and Lit" and "English Language and Lit."
[h]Name changed from "Foreign Language and Lit, Classical" to "Classical Language and Literature" in FY1967.
[i]Shown as "Modern Foreign Language, Unspecified" until FY1962. In 1962, this was broken out into seven language and literature groups as follows: "German," "French," "Spanish and Portuguese," "Italian," "Russian," "Other Slavic," and "All Other Modern Languages." In FY1969, "All Other Modern Languages" was reworded to "Other Languages" and now includes "Other Slavic" which was dropped as a separate classification.
[j]Added in FY1976.

SOURCE: Doctorate Records File, Commission on Human Resources, NRC.

Glossary

Academe	Institutions of higher education, i.e., universities, four-year colleges, and two year colleges.
Cohort	All those individuals graduating within a given period, which may be a single year or a set of years.
Field or Field of Doctorate	The academic specialty for which the research doctorate was awarded.
Humanities	Those subfields listed under the broad fields of "Humanities" and "Languages and Literature" on the Specialties List in Appendix A, excluding the field of religion.
Labor Force	Those individuals who are employed, either full-time or part-time, or hold postdoctoral appointments, plus those who are unemployed and seeking work. Retired individuals or individuals who have voluntarily removed themselves from the job market are not included in the labor force estimates.
Nonacademic Employers	Employers other than institutions of higher education, such as business and industry, government (all types), elementary and secondary schools, and any other employers.
Other Languages	Refers to Ph.D.'s awarded in the classical and modern languages and literature, excluding English and American literature.

Other Humanities	In Chapters 1 and 2 this term refers to doctorates awarded in the fields of library science, humanities (general) and humanities (other). In the remaining chapters, "other humanities" also include Ph.D.'s awarded in art history, music, speech, and philosophy.
Underemployed	In this report, this term refers to Ph.D.'s who indicated they were working full-time outside their Ph.D. field because a position in the field was not available or were employed part-time and seeking full-time employment. This term refers more to attitude that employment status is contrary to one's wishes rather than to effective utilization of Ph.D. training on the job.